



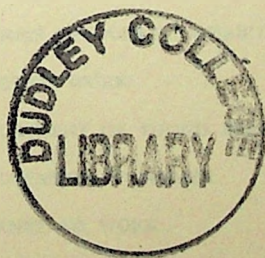
DUDLEY

LOOKING NORTH-WEST FROM KATE'S HILL

THE UNIVERSITY OF LIVERPOOL
DEPARTMENT OF SOCIAL SCIENCE

SOCIAL ASPECTS OF A
TOWN DEVELOPMENT
PLAN

A STUDY OF THE
COUNTY BOROUGH OF DUDLEY



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PREFACE

THIS Report has been prepared by the Department of Social Science for the Town Council of the County Borough of Dudley to assist the Council to produce an efficient Town Development Plan. No attempt has been made in the Report to carry out a comprehensive social survey on which the details of the Plan as a whole might be based. The objective has been solely to devote special attention to some of the chief social problems which are most relevant to town planning, in particular, to the statistical analysis of population trends, housing and employment, and the social structure and development of the several Neighbourhoods of which the Town is composed. The Report is therefore to be regarded as part of the much wider and continuing process of planning. It is primarily designed to enlist the participation of the Dudley citizens in this process, rather than to serve as a compendium of technical information for the administrator.

The planning function of a local authority has been regarded too often in the past as the mere discharge of statutory obligations imposed by the relevant legislation, which has required the allocation of the land to various uses, the fixing of densities for development, the preparation of schemes for the development of the road system, and so forth and so on. This conception of planning in merely administrative terms has been accompanied by a parallel conception of planning as the formulation of a vague ideal for the creation of a City Beautiful, again in physical terms of bricks and mortar, concrete and steel. The "hard practicality" of the draftsman's office has often been associated somewhat crudely with the idealism of an artist's studio. Both these concepts are fallacious. Planning is essentially a social function, to be carried out to facilitate the realization of the needs of the citizen of to-day, at home, at work and at play ; it can only operate effectively if it functions *with* and *through* him. Every social service for which a local authority is responsible is relevant to the planning process, every local councillor and official is in some degree a planner. As much good work can be done in

this regard, day by day, by the Education, Public Health and Housing Committees and Departments as by any Committee or Department to which the statutory functions of planning are entrusted. Moreover, it is a fundamental mistake to suppose that the function of planning is to supply, within five or ten years, or any time limit, the ideal conditions for living either for the Town as a whole, or for any of its constituent Neighbourhoods. There is nothing final about a Plan, which can only exist as *an activity* rather than *a thing*. The ultimate objective should be to foster the growth of a community which will possess the means to get to know and to express its needs, and to direct the process of day-to-day changes within it, so that its purposes may be fulfilled in adequate measure.

Many of these lessons have already been learnt in Dudley, and applied by administrative action. The rebuilding of the City Centre, the construction of a magnificent Town Hall, and the full exploitation of the opportunity that this has given to encourage the appreciation of the arts by the citizens at large, shows that the Council has set before itself an ideal that is far beyond the old dreary objectives of "bye-law development". Again, though a formal Plan for the redevelopment of the Town has not as yet been formulated, the way in which the various Housing Estates have been developed by the Council, and more piecemeal developments by public and private owners have been guided and encouraged under its direction, has shown a sensitive appreciation of the opportunities afforded by the topography and layout of the Town, and of the methods whereby advantage may be taken of them. Instances of these achievements are given in the Introduction to the present Report.

In general, the Town of Dudley is one in which planning of the more realistic type can be carried out with comparative ease; much more easily, in fact, than in many other towns. The need is not to make a virtue of necessity, as in so many other places; what has to be done is to accept the sharply-defined conditions which topography, economics and history impose and exploit them to the full. The Town has not, for instance, lost its identity in a rapidly developing urban "sprawl"; although economically and socially it is part of the Black Country, it still preserves a separate existence and identity of its own. The continuity of its growth is symbolised

by the domination of the Castle Hill over the Town, just as the adaptation of the Castle to serve the pleasure of the masses also symbolises the citizen's social independence, and freedom from the patronage of others. The Dudley citizen possesses a feeling of "belongingness" and self-reliance which, he should realize, is a precious and rare gift in the modern world. In Dudley, the old has not been overwhelmed and its contribution lost; it has been absorbed in the contemporary scene, and used as the foundation of the social life both of the Town as a whole, and of the majority of its Neighbourhoods. This heritage should be jealously protected; not only should the buildings of historical significance be preserved, but the social life of the Town should be built as far as possible round the traditional Neighbourhoods which have grown up over a long period of time, and have developed a self-conscious life of their own, and an awareness of their own characteristics and of the differences between them.

The size of Dudley also gives the Town important social and administrative advantages. It is not so large as to prevent the growth of a feeling of common interest among its citizens, and a general knowledge on the part of each citizen of the activities and interests of all. It is not so small that the values of social life are reduced to the scale of village politics, or street corner scandal. It is large enough to support an efficient apparatus of social administration of the most modern type, and small enough to enable this apparatus to work effectively, so that personal human contact can be preserved between Committees, Departments, Councillors and Officials on the one hand, and on the other, the ordinary citizen whose needs they serve. It is, in fact, the kind of town in which, the traditional pattern of representative local government in Great Britain, based on administration by Committees, can function well. There is, therefore, every reason to suppose that the ways in which Dudley is facing the problems of planning will be of great interest to many other Towns. Although only a few of them will be able to share all Dudley's advantages, all will be able to profit by the Town's experience and experiments, and it is, therefore, hoped that the present Report will be of value to all who are concerned with the social, economic and administrative problems of planning.

The Research on which the present Report has been based began in 1948. The most substantial fieldwork study was

carried out in the summer of 1949 under the direction of Mrs. Rosemary Hughes, assisted by a team of research workers; this involved the completion of a questionnaire relating to the circumstances of a "random sample" of 638 households.* It was supplemented by more general enquiries conducted from time to time during 1949 and 1950, related to such questions as the structure of Dudley's industries, the demarcation and organization of the Neighbourhoods, and the topography of the district generally. The estimated number of the population was also checked early in 1950 by a "census count." This material was assembled during the summer of 1950 and was made the basis of the present Report. Mr. Harold Silcock, assisted by Miss E. Gittus, was responsible for all the statistical operations, and for drafting the Chapters on Population and Housing. Mr. J. Gogarty, under the supervision of Miss J. Woodward, was similarly responsible for the Chapter on Industrial Employment, and Mr. P. S. Brennikov for the Chapter on the Physical Background and the maps published in this report. Mr. Herbert Jackson, Planning Consultant of the Council, gave valuable advice on the preparation of the Report, assisted by Mr. Michael Beesley, Research Associate, Birmingham University, who provided a large amount of most useful information and advice embodied in the Chapter on Industrial Employment. Miss Brenda Wright collected the material on which the Chapter on Neighbourhood Planning was based. Administrative duties involved in the preparation of the Report for publication were undertaken by Miss Mary V. J. Chisholm.

The Department of Social Science of the University of Liverpool is indebted to the Corporation of Dudley for an annual grant, continued throughout the period of the research, to meet the cost of the fieldwork, the travelling expenses of the members of the staff of the Department, the necessary statistical computations and the publication of the present Report. It is also indebted to the Nuffield Foundation for a grant towards general research expenses, which made it possible to finance the "overhead" cost of the work. All who have been engaged in the research in any way, owe a very personal debt of gratitude to the members of the Council and officials of the Corporation of Dudley for the endless pains that were taken at all times to lighten their task. In

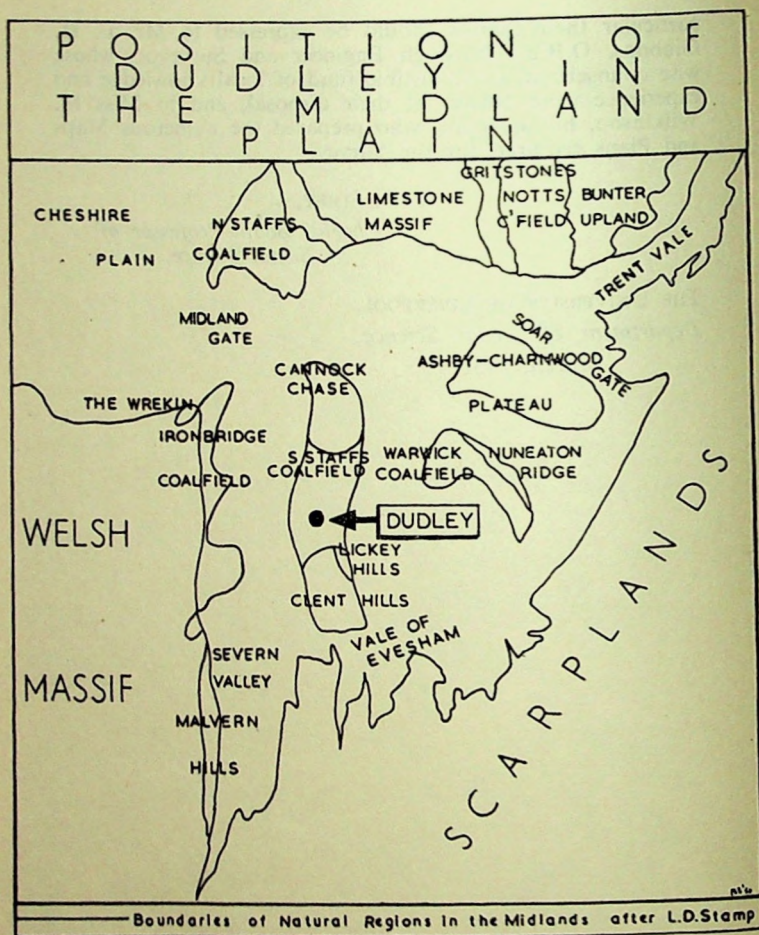
* A more detailed account of the Sample Survey is given in Appendix III.

particular their thanks should be expressed to Mr. F. H. Gibbons, O.B.E., Borough Engineer and Surveyor, whose wise counsel and inexhaustible fund of local knowledge and experience were always at their disposal, and to Miss M. Wilkinson, his assistant, who prepared the numerous Maps and Plans required for the Survey.

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THE UNIVERSITY OF LIVERPOOL,
Department of Social Science,
March, 1951



CHAPTER I.

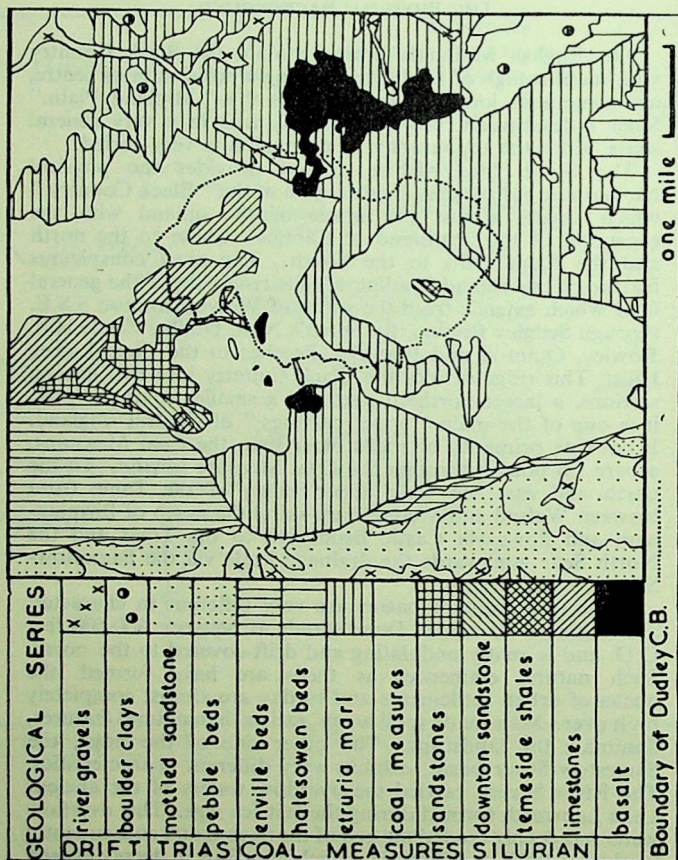
THE PHYSICAL BACKGROUND.

The English Midlands, which contain the Black Country with the Borough of Dudley occupying a position in its centre, are sometimes loosely referred to as the "Midland Plain." Such a description, however, is only true in a very general sense, since the topography of the region is very varied.

The South Staffordshire upland provides the physical background for the man-made region of the "Black Country" which covers almost the whole of the upland with the exception of the heathland of Cannock Chase to the north and the Clent Hills to the South. The most conspicuous feature of the upland is a line of hills rising above the general level which extends from the south of Wolverhampton S.S.E. through Sedgley Beacon, the Wren's Nest, Dudley Castle Hill, Rowley, Quinton and Frankley Beeches to the Clent-Lickey Hills. This ridge divides the Black Country into two uneven sections, a larger northern part and a smaller southern part; it is one of the main "water partings" of Central England. It consists primarily of rocks older than the Coal Measures, a bare rib poking through the Coal Measure upland. To the north and east the wide upper valley of the Tame from between Walsall and Wednesbury skirts the north of Birmingham and flows via Castle Bromwich to the Trent and the North Sea: westwards the drainage leads via the Samestow-Stour to the Severn.

These two drainage basins are very different in character. The basin of the upper Tame stands at between 400-500 feet O.D. and is gently undulating and drift-covered to the north. Such natural eminences as there are have formed the nuclei of urban settlements and to-day are almost completely built over. Man-made spoil heaps, rather than natural features, dominate the landscape. The other side of the ridge, the Samestow-Stour basin, exhibits very different characteristics. The River Severn carried the overflow waters of the ancient Lake Lapworth formed during the last Ice Age. This overflow water has deeply eroded the bed of the Severn and consequently "rejuvenated" its tributaries which now flow in deeply incised

valleys with steep sides. These fundamental differences have had a great influence on the subsequent development of the area, but it is the natural resources of the region coupled with the topography which have largely determined the pattern of its development.



Evidence of the fundamental importance of geology in the Black Country can be seen by the striking coincidence of its boundaries with that of the exposed coalfield, particularly in the south and west where they correspond exactly. Starting with the youngest rocks, the Stratigraphical Succession of the district is as follows:—

Rocks of the Pleistocene Age are represented by glacial sands and gravels mixed with boulder clay. These formations are of some economic value since they provide resources of sand and gravel. Next in succession are the Upper Coal Measures, represented by four series: the Enville, Keele and Halesowen beds with the Etruria Marls. Of these, the first three are unproductive and comprise a thick layer of red marls, sandstones and conglomerates. The last, the Etruria Marl, a type of purple marl, is of great economic value as a brick earth. Deposits vary from between 150-700 feet in thickness; it is from these deposits that the well-known Staffordshire blue brick is made.

These are followed by the productive Middle Coal Measures. This series, between 400 and 500 feet thick, is divided by the "Thick Coal" seam. This seam, 30 feet in thickness, was in the past, of great economic value. Above the Thick Coal the Middle Coal Measures are composed of shales, thinner coal seams and bands of ironstone, while below it is a series of sandstones and shales yielding coals, ironstones, fireclay and building stones. Below the Middle Coal Measures the "natural" sequence of rocks is interrupted by a great inconformity. The Lower Coal Measures are absent, as are the Millstone Grits and Carboniferous Limestones. The Middle Coal Measures rest on rocks of Silurian age. In the Dudley district this series is represented by three groups, Downtonian shales and sandstones (of little use commercially), a belt of Shales, Sedgley Limestones, and finally the famous Wenlock Limestone, so valuable as a flux to the early ironmasters of the Black Country and of great geological interest on account of the interesting fossils it contains. Another formation, important commercially, is the outcrop of Basalt and Dolerite, a finely-grained dark green or black rock of uncertain age, greatly valued as a road metal.

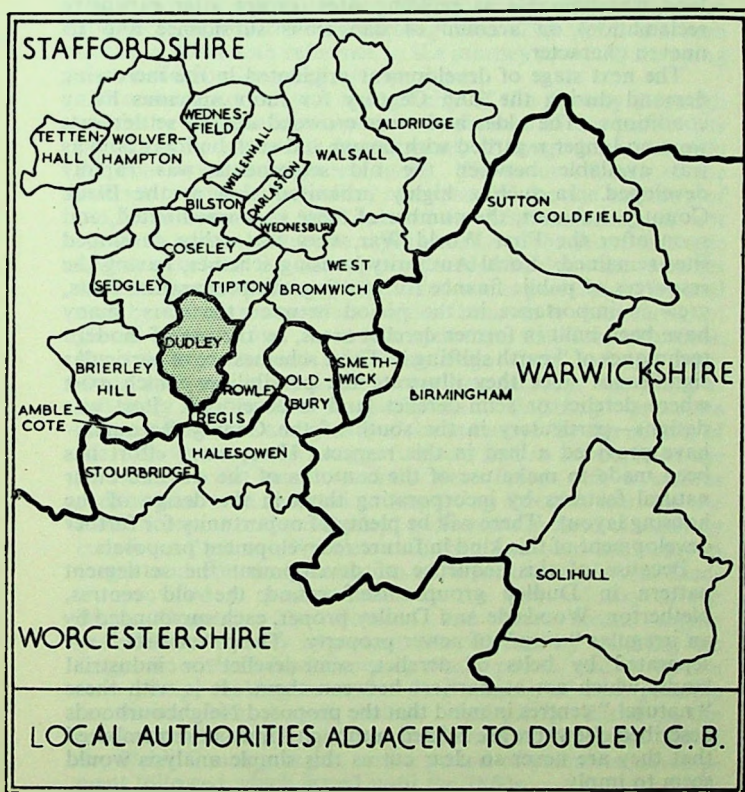
The characteristic topography of the area has been created by the exploitation of these rich natural resources. Dudley was exceptionally fortunate since an outcrop of Thick Coal of excellent quality, ironstone, fireclay and smelting flux were all

present in the area and easily extracted by early mining methods. Because of the very early development of these resources (coal was mined from the 13th Century onwards), coal, iron and limestone are to-day no longer important, since the pits are either worked out or unusable through flooding. Mining activity now centres round the extraction of fireclays and basalt for road metal, both of which, together with the recovery of road metal from old blast furnace tips, are certain to be of considerable importance for some time to come.

In addition to this varied geological character, which has played so large a part in its development, the County Borough of Dudley is fortunate in its natural topography. Mention has already been made of the ridge which forms the most conspicuous physical feature of the Black Country. The County Borough lies directly astride this ridge—its boundaries fringe the two contrasting lowland areas on either side—and the original settlement was sited where a “col” or break occurs between Dudley Castle Hill on the one hand, and Kate’s Hill on the other. This “col” provided the most convenient crossing place for east-west traffic passing over the ridge and has carried a routeway from the earliest times when Dudley, as its name implies, was a “leah” or clearing in the natural woodland which flourished on the shale, boulderclay and limestone hills. Evidence of the early significance of the site is shown by the existence of a fortified strongpoint on the steep hill overlooking the pass, which has certainly existed since before the Domesday Survey, and has played a prominent part in local history ever since. Later developments in methods of transport have not diminished the importance of this crossing point which carried both the canals and later the railways across—or rather under—the ridge. From the main line of the ridge two tongues of higher land extend south and south-westward. On these lie Netherton and Woodside separated by a trough of lowland (the Upper Blackbrook valley) which carries the railway and the Pensnett and Dudley Canals towards Dudley Tunnel. Originally separate settlements, they still remain “sub centres” physically divided from the main town centre.

Topography was, therefore, the principal factor which shaped the early settlement, particularly the naturally broken and undulating relief of the County Borough. This process was further accentuated by man’s activity when the commercial

value of the local geological formations became known, which strongly influenced the subsequent development pattern of the built up areas. Evidence from old maps* shows clearly that until well into the 19th Century settlement followed the ridges of high land, while industry and extractive workings



- * e.g. 1. Greenwood's Map dated 1820.
2. Canal Navigation Map, 1850.
3. Map accompanying Mr. Lee's Report to the General Board of Health, dated 1852.

followed the Lowland troughs separating them. As time went on this differentiation of land use became more and more accentuated. As the mines were worked out and the furnaces disused, the settled uplands were cut off from one another by belts of derelict land, threaded by railways and canals. This land was unusable as building sites (except after expensive reclamation) on account of dangerous subsidence and its uneven character.

The next stage of development originated in the increasing demand during the 20th Century for more spacious living conditions. The older and more crowded upland settlements were no longer regarded with favour and such building land as was available between the old settlements was rapidly developed. In such a highly urbanised area as the Black Country, however, the number of these sites was limited, and soon after the First World War, very few easily developed sites remained. Local Authority housing schemes, having the resources of public finance for meeting site preparation costs, grew in importance in the period between the wars; many have been built in former derelict areas, by the use of modern techniques of "earth shifting." These schemes are of particular significance since they illustrate the possibilities which exist where derelict or semi-derelict land is developed. Post war designs—particularly in the south of the County Borough—have provided a lead in this respect. Here, every effort has been made to make use of the contours of the site and other natural features by incorporating them in the design of the housing layout. There will be plenty of opportunity for further development of this kind in future redevelopment proposals.

Because of this sequence of development the settlement pattern in Dudley groups itself round the old centres, Netherton, Woodside and Dudley proper, each surrounded by an irregular "ring" of newer property. These "centres" are separated by belts of derelict, semi-derelict or industrial lands, which act as barriers between them. It is with these "natural" centres in mind that the proposed Neighbourhoods described elsewhere are defined, although it must be remembered that they are never so clear cut as this simple analysis would seem to imply.

One interesting consequence of this type of development, and one which must have a considerable influence on any plan for redevelopment, is the remarkable degree of separateness which still exists between the various parts of the County

Borough, which even a modern transport system has failed to break down. For, although distances on a map may seem slight to one unfamiliar with the district, the undulating topography, coupled with a rather tortuous road system (evolved to serve a very different land use and pattern settlement from the one we see to-day) makes these distances considerable in terms of travelling time. This point has been borne in mind with reference to the journey to work, shopping centre distribution, a similar problem.

No discussion of the topography of the County Borough would be complete without some reference to the part it has played in its industrial development, although here it is only possible to speak in general terms. The natural forests of the district provided the earliest raw material for the smelting of the local ironstone (the date of its first utilization is not certainly known) while the rapid streams of the Stour drainage system provided the water-power needed to drive the furnaces and the forges. Birmingham lacked water power, and its coal and limestone seams were hidden beneath a thick layer of glacial deposits and rocks younger than the Coal Measures. Even in the area north of Dudley ridge where coal and ironstone were available, water power was lacking, this made it necessary for the town to specialize in "finishing" processes rather than in the heavy side of the industry. By the middle of the 17th Century, the hungry furnaces had so far depleted the forests that the metal workers were faced with a serious decline and even resorted to importing Swedish iron up the River Stour. Abraham Darley* perfected a method of smelting iron from "pit cole" which until then had been used only in forges and for the calcination of limestone and with Dudley provided a great stimulus to the iron industry of the Black Country. The Boulton and Watt steam engine provided an equally important contribution by relieving the forges from their dependence on water power, and by its use as a pump, making extensive deep mining of coal possible (as distinct from the old shallow "bell pit"). Based on the local occurrence of coal, limestone and ore, the great age of the Black Country began, and a period of extensive development followed which lasted until the 1860s.

The first half of the 19th Century saw the development of the pattern of communications designed to serve industry. The canals developed early, although the district was physically un-

* *Metallum Martis*, 1665.

suited to this method of transport. Topographical difficulties were overcome by tunnels, embankments and stairways of locks. Indeed, so widespread and so efficient was this network that the railways were long held at bay, only developing to give a comprehensive coverage after 1850. One interesting and important result of the establishment of the canal system, and one which may influence redevelopment proposals, is that it appears to have become a "natural" drainage outlet for surface water and rainfall. Consequently, although its commercial importance has diminished (though by no means disappeared) any interference with it may have serious consequences for the existing drainage pattern.

The area of the Thick Coal outcrop between Wolverhampton, Dudley and Wednesbury, was the first to become heavily industrialised; in the areas north of the Dudley Ridge the boulder clay covering the coals delayed development until the middle of the 19th Century. It was these older industrial areas which became worked out first and the contraction of the traditional trades began here during the second half of the 19th Century. The Thick Coal seam with its associated ironstone bands and the local limestone quarries became worked out: the centre of coal mining in the South Staffordshire field migrated northwards to the Cannock area. Readjustment has been going on ever since. The persistence of certain specialised trades, e.g., the forging of anchors and chains, provide excellent examples of "Geographical Inertia." To-day, however, the metal trades are confined to the manufacture of "finished" and "semifinished" products rather than the preparation of raw materials. Mining, with the exception of open cast coal working, is confined to the extraction of fireclay, and road metals.

Industrial history has made an indelible mark on the present land use pattern within the County Borough. We have already seen the influence that topography has had on the settlement patterns and the location of routeways. In the location of industry (particularly early industry) it is the occurrence of the outcrop of the Thick Coal which was important. For this reason, the derelict land, which marks the site of the old extractive industries, lies mainly to the south of the main ridge on which Dudley lies. Within Dudley one of the most extensive areas is the Old Park region, the site of Thick Coal outcrops, showing the typical "hills and hollows" development characteristic of old bell pit workings. Extractive workings

for fireclay and associated coals is still carried on in the London Fields area, which consists of two slopes of a valley, the larger north-facing slope being a wilderness of mounds, spoilbanks and old pit head buildings, bare or covered with grass and bushes; the south-facing slope was once a golf course and is now well grassed, but undulating and pitted.* Part is now used for slag quarrying and controlled tipping.

The western slopes of the Netherton Hill and the Blackbrook Valley contain a large area of derelict land too steep to be of much value. The remainder of the derelict land south of the County Borough consists, in the main, of scattered patches often isolated by housing. A notable feature is the Saltwells clay pit—a vast open fireclay working—one of the largest in existence. It should also be noted that it is in this area that farming is still an important industry. Lodge Farm covers a large area within the County Borough, although scarred by opencast coal workings. Saltwells Wood, one of the few remaining natural woodlands left in the Black Country, is also within the County Borough boundary. Both are worthy of special consideration by the planner.

It is in the valley east of Netherton that some of the worst areas of derelict land exist. Round Bumble Hole, Windmill End and Darby End are old heaps of ashes and clinker, waterlogged marl holes and tumbledown buildings, a relic of the old custom of allowing free development on old workings, on the condition that no title to the land was obtained on which a claim for compensation due to subsidence could be based.

Even this brief survey has been able to indicate the wide variety of natural features within the County Borough which must influence any scheme for its redevelopment. Even though it may hamper local movement, the undulating topography provides many favourable opportunities for the development of Neighbourhoods. It should, however, be remembered that it adds to the difficulties of new developments in many respects, the most outstanding of which is sewerage. The great amenity value of many local features (for example, the canal reservoirs) can be exploited with imaginative treatment. The greatest problem of all is derelict land but this is not without its bright side. Although very costly to redevelop, it offers great possibilities. Despite the fact that clearance for housing is

* S. H. Beaver, *Survey of Derelict Land in the Black Country* His Majesty's Stationery Office, 1946.

impracticable, it may still be capable of use as public open space. Even the small scattered patches at present dispersed among buildings must be regarded as assets, whilst the larger areas readily lend themselves to utilization as sports fields and as plantation sites.

The derelict areas are an unhappy legacy from the past, but in many ways Dudley is fortunate in having a greater variety of land use than is usual in the Black Country. The many areas of redevelopment show the possibilities of site improvement with modern methods of earth moving; some of them are on reclaimed derelict land, although the largest areas of redevelopment round the Wren's Nest hills are on the site of a former private estate. The old workings on the limestone hills, preserved as open spaces, are now covered with firm roads, and Dudley Zoo has been so planned as to make excellent use of old limestone quarries; the result demonstrates that places which now mar the appearance of the Town can be transformed into objects of beauty.

Another point to be borne in mind when considering derelict land in the district is that most of the old spoil heaps were built up by hand tipping. The results of this method are very different from that produced by the mechanical methods used subsequently. Hand tipping creates an extensive but low spoil heap; its wide extent was unimportant when plenty of land was available for use in this way. Mechanical tipping, as well as dealing with larger quantities of waste more quickly, uses up very much less land, now expensive and in short supply, since the tip can be built up to considerable heights. Hence steep-sided conical heaps are a notable feature in many modern industrial areas. The hand-tipped heap offers more scope, both for levelling and clearing or planting, particularly after time and the weather has consolidated the mass. Large, mechanically-piled tips present an almost insuperable reclamation problem; their size makes levelling almost impossible, while the steep sides make planting exceedingly difficult. In some cases the slope has been so steep that even a grass cover cannot develop. Dudley is fortunate in not having many major problems of this kind to contend with.

Even in their present state the overgrown spoil heaps do provide some measure of relief from the drab urban sprawl which characterises so many of our industrial areas. One of their chief disadvantages for redevelopment is that many of them are still valuable as sources of slag, road metal, etc., or

are used as controlled tipping areas, and consequently must be regarded for some time to come as "sterilized." Nor should one forget the existing extractive industries which will also "sterilize" large areas for many years, although the widespread damage of former years will, it is to be hoped, never be repeated.

Next in importance to the question of derelict land, and in some ways an extension of it, is the acute shortage of suitable building land. The successive stages of urban development which have taken place in Dudley have already been mentioned in the discussion of the growth of the pattern of settlement. These stages of growth have left very little land available for the next stage, the planned redevelopment of the County Borough on the standards required by modern town planning practice. The County Borough is therefore faced, at the beginning of what must be the largest programme of development in its long history, with the difficulty of rebuilding on derelict land which is both expensive and difficult to develop. There are considerable areas within the old Town which are not satisfactory by modern standards of density and accommodation and it is by no means easy to suggest methods of rehousing the people who must inevitably be moved from them when the work of reconstruction is begun.

This problem is common to all local authorities in the Black Country, but it exists in Dudley in an acute form. This is not the place to suggest possible solutions but it is obvious that it cannot be solved within the town's boundaries.

In conclusion it may be said that although the existing topography and land use within the County Borough set many problems, they also provide many opportunities. Recent developments have served to indicate what can be done; there are many instances of the successful adaptation and reconstruction of small areas so as to serve new purposes, and to satisfy higher standards of building construction and of amenity. The Town has been well served by its Council and by its Borough Surveyor in this respect. Valuable experience in the effective solution of local problems of peculiar difficulty has been accumulated, and there is every hope that this can be turned to good account in the solution of the problems which the Council will be compelled to face in the future.

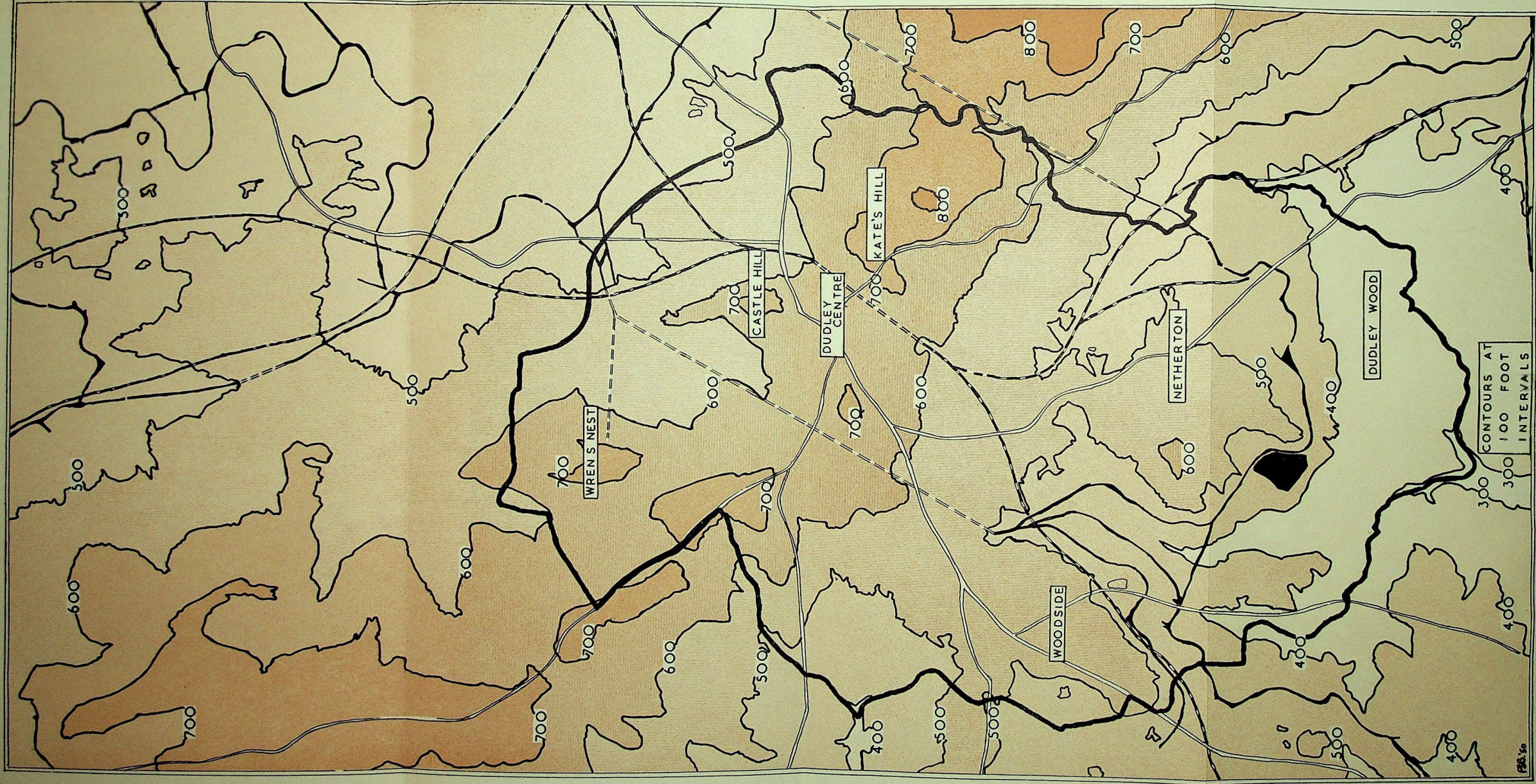
CHAPTER II.

NEIGHBOURHOOD PLANNING.

The solution of the social problems of Dudley calls first and foremost for the provision of a reasonable standard of accommodation for each individual family. This is the immediate issue facing those who have to consider the welfare of Dudley people. The provision of houses, however, is not in itself a complete answer to the social problems with which the Town is faced, and the evidence assembled in the present Report demonstrates that wider needs must be taken into consideration by the planner. An attempt has therefore been made to show in what respects the life of the existing residential districts needs to be replanned to make it easier for neighbourly relations to develop, and to discover methods whereby new housing estates can be fitted into the existing frame-work of social life and amenities.

The first step was to investigate prevailing patterns of social life in the Town, and this made it apparent that a number of neighbourhoods have existed in Dudley for many years, and that others could be created without undue expenditure of money or effort. This is a fact of the greatest significance, for the concept of the Neighbourhood as the basic unit of planning has been evolved as a means of solving the problem of improving living conditions in urban areas. Though much doubt still remains as the extent to which the Neighbourhood is a complete solution in itself, there can be no doubt that the development of the existing communities into which Dudley is divided, and the creation of closer links between each of them and the Town as a whole, can only have the result of making Dudley a happier and more efficient place in which to live. In some respects, as will be seen from the discussion of Dudley's problems which is contained in the later pages of this Report, the Town may be regarded as an extremely interesting example of what may be achieved by the utilization of the "neighbourhood concept" in planning, and that the world at large has much to learn from local experience.

So far as the present Report is concerned, it is unnecessary to pay much attention to the problem of how neighbourhoods



are defined, from the point of view at least of their identification. Most of Dudley's neighbourhoods can be easily recognised as communities within which social contact and collaboration have taken place in one degree or another over a period of many years. Nevertheless, it is necessary to examine the social groupings which exist in the Town with care. Topographical features alone cannot create a true neighbourhood; mere physical contact, the sharing of shopping facilities and attending the same clinic, do not necessarily create a strong social bond, though they usually tend in this direction; the mere bringing of people together may produce friction rather than cohesion. It must be emphasised that the essence of a Neighbourhood from the point of view of the planner and sociologist alike, is the opportunity it provides for people to meet together, to share the burdens of daily life, and to co-operate in an endeavour to overcome their common problems. As will be seen from the description of Dudley's Neighbourhoods which is given below, not all of them satisfy these requirements completely. Two, Netherton and Kate's Hill, are already Neighbourhoods in the true sense, because the modern communities living in them have grown out of much older settlements. At the other end of the scale are Priory Hill and Woodside, in which a large measure of what may be termed "common neighbourliness" exists within relatively small groups, but which can hardly be regarded as more than potential Neighbourhoods at the present time. It is one of the chief purposes of the Report to show that there are ways and means whereby these potentialities may be realised for the common good, both of the Neighbourhoods themselves, and of the Town as a whole.

The extent of Dudley's good fortune in this respect must be emphasised because it is maintained by some that Neighbourhoods which are not only distinct territorial groups, but whose inhabitants are also in close social contact with each other, rarely exist. It has been thought by some that this goes further than the facts warrant, especially as the traditional neighbourhood structure of Dudley is typical of that of many of the older areas of industrial development which have not even yet been overwhelmed in the spreading masses of the great Cities; such conditions still obtain, for instance, in other areas in the Black Country and in the older industrial settlements in the Pennine Valleys. But the generalization is nevertheless important, because the bulk of the population of Great Britain is becoming

concentrated in the conurbations, and the trend of the times is towards making it entirely true, rather than the reverse. If, therefore, Dudley's social assets can now be exploited as her mineral wealth has been in the past, much can be achieved which will be of great value to the authorities responsible for planning built-up areas everywhere, and so also to the citizens who live in them.

The Neighbourhood idea is of particular importance to the town planner because it provides a means of meeting certain social needs which cannot be met in any other way, even at prohibitive cost. The most basic of all social institutions is, of course, the family, which appears in one form or another in all human societies. No society, however, has been able to provide for all human needs through family organization alone; individual families of the "primary" type, composed mainly of parents and their children, must always be brought together into a co-operative relationship if the difficulties of agriculture and economic production, adolescence and marriage, child care, old age, and the like are to be satisfactorily overcome. The chief social problem with which contemporary social life presents us in England, is that this co-operative relationship has to a large extent been removed from the pattern of social organization in the newer urban areas. Lacking it, the ways in which people are brought together in new towns and suburbs have become artificial; they are too often designed to make it easier to do things *for* people rather than encouraging them to do things with and for each other. It is this spontaneous social life, such as is to be found in parts of the older towns and in many villages, which the planner has endeavoured to foster.

The idea of developing the self-reliant family through the encouragement of "neighbourliness" has, indeed, been at the root of the planner's advocacy of the development of Neighbourhoods. Although this has appeared at times merely to be part of a general scheme for the improvement of the efficiency of the social services by creating administrative areas for such purposes as educational and public health administration, the conclusion is both superficial and unwarranted. Planning theory has, in fact, gone to quite the opposite extreme in recent years. Instead of accepting administrative efficiency as the objective, the aim has rather been to create a "balanced community" in each Neighbourhood, by giving all classes and all kinds of individuals an appropriate place and an appropriate

function in it. The facts which have come to light have, however, not supported the idea that this "mixing of classes" does actually create a higher degree of contentment amongst neighbours; indeed, there appears to be more evidence that people like to live alongside neighbours who are like themselves in regard to their education, kind of employment, preferences as to leisure-time activities, and so on, rather than the reverse. The objective which is now coming to be accepted is, therefore, the creation within every Town of a number of Neighbourhoods in which different kinds of people can feel at home, without at the same time coming to feel either "exclusive" or "deprived."

A degree of balance must therefore be sought both within and between Neighbourhoods. This can in some measure be achieved by encouraging individual Neighbourhoods to develop services and activities which are thought desirable by the several types of persons and classes living in them, and by giving scope for the automatic operation of the process whereby like attracts like. It is also important to achieve a balance between the localising of services and amenities in the Neighbourhoods, on the one hand, and centralizing them in the Town's Centre on the other. The extremes of complete dependence and independence must both be avoided, and each Neighbourhood and every individual Citizen encouraged to participate in some measure in the wider life of the Town as a whole. Every opportunity must be taken to facilitate co-operation between the Neighbourhoods, and to restrict unhealthy competition between them of the kind which leads to the creation of harmful jealousies and the narrow local pride which is parochial rather than public spirited.

Before detailed examination is given to the present equipment of the Town Centre and the individual Neighbourhoods, the services and amenities which each should be expected to provide must be briefly considered. The keystone of Neighbourhood design must be the provision of adequate accommodation for each family, but it must not be forgotten that the satisfaction of economic and social needs is of almost equal importance. In the first place, adequate opportunities for employment must be available, and the existing state of affairs in regard to this question has therefore been examined in the section of the present Report devoted to Industrial Employment. A well established and satisfactory Neighbourhood should also have facilities for daily or weekly shopping within

easy walking distance (say ten minutes). More occasional purchases of clothing, furniture, etc., can then be made at some larger centre further away with no great inconvenience; the outing may, indeed, afford considerable pleasure. Schools for smaller children should also be available in each Neighbourhood within easy walking distance. It is impracticable, however, to lay down as a planning requirement in Dudley that schools should be sited so that the smaller children do not have to cross main roads on their way to them. Maternity and Child Welfare Clinics are now a popularly accepted form of social service, and any Neighbourhood which is to be regarded as reasonably self-sufficient must be adequately provided for in that respect.

Opportunities for satisfying activity during leisure time are, of course, of the first importance; allotments, sports grounds, facilities for social and cultural activities of all kinds, are all of the greatest relevance in this connection. In so far as these depend on extensive increases in the area of open space within each Neighbourhood, this point is hardly relevant to the situation in Dudley, which has in this regard to face a problem of peculiar difficulty. It would appear that all that can be done is, on the one hand, to make the best possible use of such resources as are available in the residential districts, the special needs of older people and mothers with young children to take their rest in the open air being given first consideration in this regard. The older children, on the other hand, must probably be left to seek opportunities for their more energetic play further afield in the tracts of open land intersecting the County Borough, of which better use might be made.

Finally, the Neighbourhood should also contain adequate facilities for the care of the aged. Able-bodied old people should be left as long as possible in contact with their relatives, in accordance with the normal wishes of both sides. Some old people are best cared for in the homes of their children, but this is only possible if adequate bedroom accommodation is made available. Others, particularly elderly married couples will wish to live in small flats near their relatives and friends. Others again, such as the infirm, will prefer to live in hostels, where a certain amount of nursing attention can be made available to them. Only the bedridden and incapable should, as a last resort, be admitted to an institution and then, if possible, only for short periods. There is a regrettable tendency to regard age as a necessary evil, even though

many old people are quite capable of continuing to work long past the usual retiring age, and are often capable of playing a very useful part in the economy of a community. They possess a skill and knowledge which can only be acquired by years of experience, and any industrial survey of manpower requirements should not overlook this fact. It should also be remembered that the knowledge and experience of older people is a necessary factor in developing a balanced life for any community.

It cannot be emphasised too strongly that good physical conditions will not automatically produce a good Neighbourhood; there must be other forces present which work towards integration, and help to bring about a sense of "belonging." It is only on these foundations that a pride in the neighbourhood can be developed. In the past, the task of fostering a "community sense" has been to a large extent undertaken by the religious bodies, and Churches and Chapels are still frequently found to be actively fulfilling this function. Any plans for the development of the Social Services in Dudley which aim at fostering a community spirit, must take into account the excellent work that has already been done in this direction by them, not only in their separate denominations, but by collaboration and joint effort. Various Council Committees include representatives from the local clergy, who are active in furthering the cause of the development of social amenities. Special mention should be made of the Youth Organisations, fifty of the eighty clubs in the County Borough being sponsored by the Churches, which is a very high percentage. Nevertheless, the situation in the modern urban area is one of such complexity as to seem to require the addition of the energies of secular bodies to those already at work. Specific suggestions are made later in this Report; it is enough at the moment to stress that voluntary and public bodies alike have here an opportunity for service which they must be encouraged to seize with energy and enthusiasm.

From all this, it clearly emerges that the most important function of planning should be to give direction to natural growth, and consequently every effort should be made to strengthen existing ties and neighbourhood loyalties by utilising to the fullest extent such resources as lie ready at hand. This is particularly important in the case of Dudley where there is little room for the creation of new communities, and where, therefore, a merely theoretical approach to the problem of

neighbourhood development cannot serve a useful purpose. The position of Dudley as it is, and as it will be in the future, prohibits this. The demarcation of new open spaces, new housing layouts and shopping centres are all quite outside the range of practical politics so far as Dudley is concerned. The most profitable approach, therefore, has seemed to be to describe the existing Neighbourhoods within the County Borough, and to attempt to estimate the extent to which each has succeeded in becoming a balanced community in itself, and an integral part of the Town as a whole.

THE DUDLEY NEIGHBOURHOODS

A preliminary survey of the economic and social life of Dudley demonstrated the existence of three Neighbourhoods based on historical settlements, namely, Netherton, Kate's Hill and Woodside. Two new centres were also shown to have come into existence in recent years at Priory Hill and Dudley Wood. These are the natural "growing points" for future development. The Town Centre cannot, of course, be regarded as a true Neighbourhood; it is an area of distinctive character and its function is obviously to serve the needs of the Town as a whole.

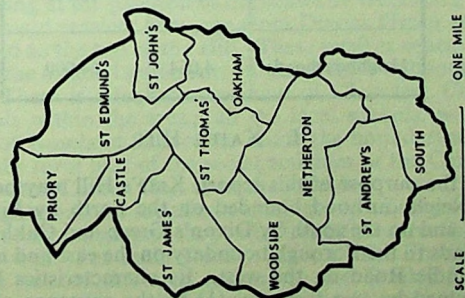
The populations of these areas are shown in Table I, from which it will be seen that they include 77% of the total population of the Town, a percentage which will be substantially increased if the Tansley Hill area is included in the Kate's Hill Neighbourhood. Their boundaries are shown on the Map on page 31 which also shows the Ward boundaries, and the boundaries of the Parishes of the Church of England.

In order to make a comparison possible between the different Neighbourhoods in regard to the degree to which they had been successful in capturing the loyalties of their inhabitants and infusing them with a sense of "belonging," certain questions were included in the house to house survey (see Appendix IV). These were as follows :—

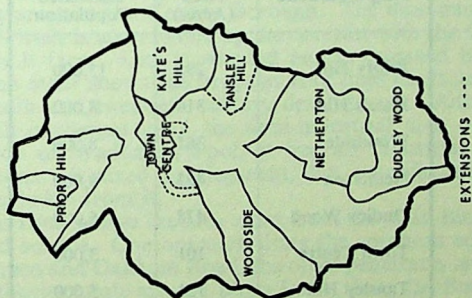
- 1 Did you use your local vote last month?*
- 2 Do any of your relatives or in-laws live in the same street as you?
- 3 Have you any personal friends amongst your neighbours?
- 4 If you were free to choose, would you want to live among the same kind of people as are in your street now?

* The survey took place shortly after a local election.

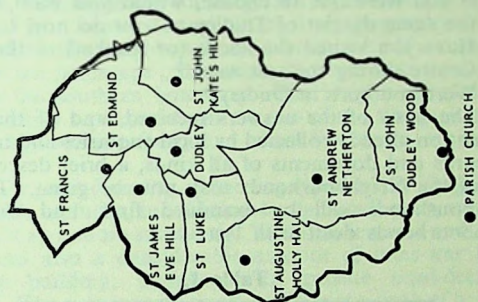
Local Government Wards.



Social Neighbourhoods.



Ecclesiastical Parishes.



- 5 If you were free to choose, would you want to live in the same district of Dudley as you do now ?
- 6 Have you visited the shops (or market) in the Dudley Centre during the last week ?
- 7 Were you born in Dudley ?

On the basis of the answers received, and of the general information already collected by local enquiries and inspection of records and documents of all kinds, a brief description of each of the Neighbourhoods may now be given. The older Neighbourhoods will be examined first, and the newer Neighbourhoods dealt with last.

Table 1.

Neighbourhood	Area (Acres)	Estimated Population
Priory Hill . .	296	15,000
Kate's Hill . .	310	8,000
Woodside . .	365	8,000
Netherton . .	423	9,000
Dudley Wood	478	6,000
Town Centre	101	3,000
Tansley Hill	151	5,000
Other Areas	1,940	10,000
Neighbourhoods	4,064	64,000

I. KATE'S HILL.

For the purpose of this report, Kate's Hill may be regarded as a Neighbourhood bounded on the north by Birmingham Road, and on the south by Dixon's Green and Oakham Road; it extends to the Borough boundary on the east and is bounded by Trindle Road on the west. Its characteristics have been determined by two factors : (1) by the existence of an older

settlement, surrounded by an irregular ring of newer property, referred to in Chapter I, and (2) by its topography. Kate's Hill, on which the Neighbourhood is built, is itself a dominant feature of the landscape ; it reaches its peak at the reservoir, almost at the southern boundary. The Neighbourhood as a whole is clearly separated from the rest of the Borough by the main roads, and the railway line which lies in the low land to the west.

There is a great diversity of housing types in this Neighbourhood, which includes, in addition to the small property built many years ago, more substantial Victorian terraces and larger houses, and also a considerable amount of inter-war Local Authority building, together with private semi-detached dwellings. The area is quite small, and variety, both of housing and of contour, combine to make it one of the most potentially interesting areas in the County Borough. The dominance of Kate's Hill itself is accentuated by the contrast with the Castle Hill which it faces. One is wooded and is crowned by the Castle; the other shows the irregular roof lines characteristic of nineteenth and twentieth century development. Although Kate's Hill converges upon the semi-industrial area on the further side of Waddam's Pool, it has no industrial core. It is an area of mixed development, but manufacturing is entirely excluded from it.

Two bus routes serve the area apart from the main Birmingham Road service. One operates along the southern edge of Dixons Green and Oakham Road, the other penetrates into the Local Authority estate around Binns Lane, along the Borough boundary. The area served is, therefore, roughly triangular, the apex being at the junction of the routes at Waddam's Pool, where the main services converge from Dixons Green and St. John's Road to the top of the Hill. These services centre upon the area of the original settlement on which the Neighbourhood is based. There is adequate provision of Churches, Chapels and Schools within the area; all the local schools, with the exception of Roseland School, lie inside the boundaries. The Youth Clubs form part of the social activities of the Churches and meet at the Church Hall or in the schools.

The Neighbourhood includes a small group of shops and a number of scattered general shops which together serve the area reasonably well. The main Dudley Clinic ("The Firs") is at the further end of this area nearest to the Dudley Centre. There is, however, a noticeable lack of open space, for the

existing playing field does not serve this purpose adequately. A park would add to the beauty of the area and meet the needs of older people and mothers with small children; even to those living in the less cramped conditions of new development it would be an asset.

The extent to which the inhabitants use the facilities available at Dudley Centre is less marked than in Priory Hill which also adjoins it; this is due to the fact that the local centre is better established. The attraction of the Town Centre is, nevertheless, still strong, the travelling distance being extremely small; it is easier for people living in the further corners of the area to get a bus into the Centre than to the Kate's Hill centre. The greater range of shops, entertainments and cultural facilities available at the Centre is also an important consideration. When the proposed demolition scheme is carried out there will be an even greater tendency to bye-pass the Hill centre, which depends more upon old associations than on convenience. The existing centre on the Hill and its townward slope will not form the most natural point of convergence for the outer ring of any new development.

The present population is approximately 8,000, but it is unlikely that in the future the Neighbourhood will be restricted to its present size. Extensions are proposed in the Sledmere district on the other side of Oakham Road, which will form a natural part of Kat's Hill. The centre of gravity of the Neighbourhood will inevitably then move to the cross roads of Buffery Road, Oakham Road and Dixon's Green. This point is further away from the Dudley Centre, but as it lies in the direct line of traffic flow, it could undoubtedly be developed into a most satisfactory centre for local life. It would therefore seem advisable that any redevelopment of the Neighbourhood should encourage the siting of future amenities at this junction rather than at the present junction near "The Firs" Clinic.

Kate's Hill is interesting in that its present structure is likely to be fundamentally changed within a short space of time. At present, its character is very definitely influenced by the steep irregularity of the small terraced houses and the old general shops, and these will quickly lose their importance in its life. The districts they occupy cannot be regarded as a thriving centre; there is a general atmosphere of decay associated with it which is always present where more or less derelict houses are intermingled with others. There are a number of old unused shops, and whole areas due for demoli-

tion, as for instance, around Brewery Street. Its vitality is noticeably declining, not having been reinforced by any influx of population in the inter-war period. There is a danger, in fact, that a vicious circle will be established, for if the Kate's Hill centre does not attract a new population, the result will be that the rate of its decline will increase still further, and still fewer residents will move into it.

The possibilities of re-development are, however, immense, and a valuable opportunity exists to create a vital Neighbourhood without extensive reconstruction. Though Kate's Hill is declining as an economic centre, it is still an area which has a marked degree of independence or self-consciousness, and as far as the residents are concerned, it is a distinct district of Dudley with a history and an individuality of its own.

The increased consciousness of association with the Neighbourhood is reflected in the data collected in the Survey. Although Kate's Hill is closely associated with Dudley Centre (as shown by the relatively high proportion who visit the Dudley shops at least once a week), there is a high proportion of people who have personal friends among their neighbours. This appears to indicate a certain amount of satisfaction with the area, and with personal relationships within it, which augurs well for the future of any scheme of social development on a Neighbourhood basis.

II. NETHERTON.

It is hardly necessary to define the boundaries of the Netherton Neighbourhood with precision, because it is both well established and reasonably compact. It is separated from Dudley by a band of semi-derelict or industrial land, which at present surrounds the whole of the Neighbourhood. This land bears the imprint of former mining or quarrying activities now largely defunct; it is sparsely inhabited, for it only contains scattered groups of old houses, as for instance, along St. Peter's Road and Darby End. The more or less open land to the south has been used extensively for new housing sites, but the Dudley Canal provides a definite boundary along the whole of the southern side. In general, Netherton may be defined as including the area extending from the Railway at Cinder Bank to the Dudley Canal, and between St. Peter's Road and Highbridge Road and Netherton Hill. This area contains a population of approximately 9,000. It is the

only Neighbourhood which has a well-defined and established nucleus upon which main roads converge radially; the other Neighbourhoods have grown up around or between the main transport routes in and out of the Dudley Centre.

As in Kate's Hill, a great variety of housing is to be found in Netherton, ranging from the very old to the quite new; it has a character of its own none the less. As it is a mixed industrial area, the old tradition of small local industries has left a deep mark on its life, with the result that it is even now not so solidly residential in character as Kate's Hill. Netherton is still predominantly industrial, small factories and workshops being intermixed with residential property right up to its centre in Hill Street and Bell Road. The larger industrial units surround this inner core.

Although Netherton is therefore a compact area in that it does not merge imperceptibly into other areas, there is a high degree of confused development within it, due mainly to the extreme difficulty and expense involved in utilizing the available sites, which are necessarily limited in numbers and in extent. Development has, therefore, been piecemeal; this in itself is not a drawback from the point of view of its success, as can be seen from the Lodge Farm Estate, which, though not strictly within the limits of Netherton as here defined, affords a good example of the successful utilization of an area of semi-derelict land for a small scale housing project. It is important, however, that small groups of houses of this type should eventually be linked to one focal point or another. This Estate suffers from being somewhat isolated from Netherton, but is now linked to both Netherton and Dudley by better roads and more adequate bus services.

Netherton, like Kate's Hill, is in process of change, but in a different way. Groups of buildings lying behind the High Street, which formed the original settlement of Netherton, are scheduled for demolition but the Neighbourhood no longer depends upon this area to give it identity and vitality. Netherton as a whole is more closely related to the High Street, which is thriving and shows no sign of decay, for new shops and buildings are scattered among the old. It is still the natural centre for the surrounding area. The Survey shows that a very large proportion of the inhabitants do not use the Town Centre shops even once a week, and appear to find the local shops adequate for their needs.

Unlike any of the other Neighbourhoods, Netherton is not

wholly dependent on the Town Centre for its cultural facilities. The Arts Centre, which includes a theatre, library and public hall, was built by the Town Council to provide additional library facilities and a hall for entertainments, mainly drama. The Library and Arts Committee and the Dudley Arts Club are jointly responsible for the administration of the Centre, and they work in official association with the Arts Council of Great Britain. During the day, the Centre is used as the Netherton Public Library, most of the bookshelves being in the main hall. With its fully equipped stage, it is used as a theatre or a concert hall in the evenings. The Midland Theatre Company and London companies frequently give plays at the Centre, and amateur dramatic societies are expected to reach an adequate standard if they wish to give performances. Since 1948, Netherton has been the centre of the Dudley Drama League Festival, which is open to amateur companies within a twelve-mile radius of Dudley. The Festival attracts attention over a wide area. The dual use to which the Centre is put has its advantages in that it makes possible the existence of both a Library and a Social Centre. There are disadvantages, however, the most obvious being that the Library cannot be used as such in the evenings, and that additional work is involved in preparing the premises for the evening activities.

Although the Arts Centre is situated in Netherton, it is still regarded for administrative purposes as part of the activities of the Town Centre. The people of Netherton have no special part in its management, though they use it extensively, and take an interest in what is going on in it. It can in no way be regarded as "belonging" to Netherton. Because of its position, however, consideration should be given to the possibilities of using the Centre as a community centre for the Neighbourhood.

Adjacent to the Arts Centre are the cinema and the park. The clinic is at present unsuitably housed, in regard both to the building and its site, but it is nevertheless well attended and provides services of which great use is made. There are also several youth clubs which are, as in the rest of Dudley, mainly attached to the local Churches and Chapels and are accommodated in their halls and in the schools as well as the Public Hall.

Netherton is not well supplied with public open spaces, measured by present standards of planning, but it has a centrally placed park, and a cricket ground on the further side of the centre near St. Andrew's Church. In this connection it

should, however, be remembered that the proportion of actual open space is high. Much of this is derelict land, and the cost of rehabilitation may be considerable. Nevertheless, some use might be made of it as natural playgrounds. It also appears probable that some of the land now occupied by industry may be made available for public use as open space in relatively small plots.

As can be gathered from this description, Netherton's connections with the Dudley Centre are not as strong as those of other Neighbourhoods. The inhabitants do not think of it as part of Dudley, but as a completely separate town. The idea that the Neighbourhood is a suburb or offshoot of Dudley is remarkable by its absence. Netherton displays individual characteristics of its own, which are largely due to the influence that industry has had in the past upon its physical make-up, and there is no sign that the strength of its individuality is weakening. A high proportion of residents were born in the County Borough and have always lived in the district. This is a factor which consolidates the community, particularly as this tendency is still continuing; this is shown in the figures for all age groups, though most markedly amongst the older people, as is usually the case. As Netherton is a thriving community, attractive to young people, there is no prospect that its population will be overweighted to a large extent by the aged.

The proportion of people who would prefer to live in the same district is the average for the Town as a whole, but the proportion who would prefer to have people like themselves as neighbours is noticeably higher than the average. This indicates a general satisfaction with the Neighbourhood in terms of neighbourliness; it is of great importance as a factor contributing to the making of a satisfactory neighbourhood. Further attention is, of course, being given to the improvement of the quality of the houses, and this will improve still further the degree of identification which is enjoyed by the residents. Future developments in Netherton would seem to lie in exploring the extent to which the social life of the Neighbourhood can be related to that of the Town as a whole. This is a difficult problem, but one which must be solved. If the Arts Centre were developed with more emphasis on its function as a local community centre, it is probable that links might be forged between it and any other centres of a similar type which may be provided in the future, with mutual benefit to both Netherton and other Neighbourhoods.

III. WOODSIDE.

This is one of the three more isolated Neighbourhoods although the survey indicates that it is more closely related to the Town Centre than Dudley Wood and Netherton. It extends from Queen's Cross and the Kingswinford Road to Canal Street on the Stourbridge Road, and between the Borough boundary on the West and a semi-circular strip of industrial and semi-derelict land on its East, where it adjoins Netherton. Although it was originally one of the older settlements, quite separate from the Town of Dudley, the new development around it and along the main Stourbridge Road has merged the modern Neighbourhood into the Town Centre.

Woodside is at present dominated by the importance of the heavy transport road which runs through it; new building has tended to take place along this road rather than around any particular nucleus. The Neighbourhood is, therefore, rectangular in shape, extending from Queen's Cross to Canal Street in a broad band parallel to the road.

The population of the Neighbourhood is approximately 8,000; it contains within it a wide variety of housing types. The Stourbridge Road is flanked by modern semi-detached dwellings, between which are the older units of Holly Hall and Hart's Hill, separated by small blocks of Local Authority housing. There are two areas scheduled for future demolition, one at Holly Hall and one at Hart's Hill, around Chapel Street.

It may appear from this analysis that Woodside has few of the characteristics of a true Neighbourhood, but this conclusion is by no means justified, for the area is physically separated on both its east and west sides from other development, and is joined to the Town Centre only by a small band of housing along the main road. Even more important, there is an existing local centre at Holly Hall, where are clustered the Public Hall and Library, the Clinic, several Chapels, and St. Augustine's Church, with their associated social activities. This centre adjoins the only open space serving the area, *i.e.* Woodside Park, and also includes a small shopping centre which serves the blocks of Local Authority housing and privately owned houses distributed along the Stourbridge Road. Like Netherton, the Neighbourhood has close links with industry; it is not a purely residential area, but is hemmed in by factories scattered along the Pensnett Canal, and the railway line which runs diagonally across the Borough.

Future development is not likely to change the characteristics of the Neighbourhood to any marked degree, as the cross roads at Holly Hall are a natural focus which is given added importance by the buildings providing social services and amenities which cluster round the older housing. These services are sufficiently well established and conveniently placed to be a permanent feature of the area, irrespective of the changes which may be involved in the proposed development schemes.

The analysis of the material derived from the sample investigation showed the same tendencies as are exhibited in the other remoter Neighbourhoods in the Borough. The proportion of inhabitants who used their vote at local elections was low. Although the proportion who used the central shops was similar to that prevailing in the rest of the Borough, far fewer inhabitants used them for their daily needs. There was also an average proportion who preferred to live among the same people, but there was a significantly high proportion who would prefer to live in the same district. This reflects the extent to which the area has been found satisfactory by the people living in it. The numbers of private semi-detached houses tend to make it a place where it is "nice" to live, whereas the mixture of poorer property lowers the proportion who say they like the people in the area. In contrast to Netherton, the newer property is the dominant element at the present time in this Neighbourhood; this trend will, no doubt, be emphasised in the future if the proposed Old Park Estate becomes more closely associated with Woodside than with the Town Centre, which could happen with advantage both to Old Park and to Woodside itself.

IV. PRIORY HILL.

Priory Hill is a comparatively new area of development which includes an Estate designed to accommodate the people from the areas scheduled for demolition in the centre of Dudley, and to rehouse families living in overcrowded conditions. It is situated on one of the most pleasant sites in the Town, overlooked on one side by the wooded slopes of Castle Hill, and grouped in a horseshoe shape around Wren's Nest Hill, which is a wooded open space. It is spared the vistas of derelict or semi-derelict land common to other parts of Dudley since it lies in a hollow surrounded by trees. The approach to the

Town is via Broadway and Priory Road, which pass through the area containing the new Civic Buildings and public gardens. Its population is approximately 15,000.

The Neighbourhood is split into two main sections, Priory on the one hand and Wren's Nest Estate on the other, which meet at the foot of Wren's Nest Hill. Both areas are served by bus routes straight through their centres; these meet and join Priory Road. There are no main roads used primarily for industrial purposes.

Priory Hill differs fundamentally from the other Dudley Neighbourhoods in that it has no original older settlement as its nucleus. Although it is overlooked by the Castle, and takes its name from the famed Priory, these can only be regarded as scenic amenities of the area and have apparently had no other influence. It is an area of housing of the same age and type, based upon the modern demand for fewer houses per acre, each house possessing its individual garden both at back and front, built in cul-de-sacs, crescents, rings, etc., of small "estate" roads. From the development point of view it is relatively static, that is, there are no areas of houses ripe for demolition, and subsequent reconstruction.

Priory Hill has, at present, only two local centres of social interest :—

- 1 St. Christopher's Church, with the adjoining school in the middle of Wren's Nest in the left hand of the arc of the horseshoe.
- 2 St. Frances' Church and the group of modern buildings which house the clinic and School in Cedar Road, serving the right hand part of the Estate at the foot of Wren's Nest Hill.

There is no public open space apart from Priory Park, which is small but well laid out and contains the ruins of the Old Priory, a Bowling Green, Tennis Courts, and the Priory, which is used for both administrative purposes and a Boys' Club. There are several general shops in both Priory Hill and in Wren's Nest, but the main group of shops, which is not large, is on Priory Road. The shops in the Town Centre are used extensively by Priory Hill people, who also tend to look to the Centre for the satisfaction of their religious, recreational and other social needs. Few of its inhabitants are employed within the Neighbourhood, and the range of their social life, so far as the immediate locality goes, tends to be restricted to those activities which are carried on within the home.

The survey material strengthens the impression that the Neighbourhood lacks social unity, and that it possesses few social characteristics which distinguish it from the other Neighbourhoods. It was not remarkable for either a high or proportion of votes in the local elections or for any definite proportion who like or dislike the area or the people who live in it. Its inhabitants do tend, however, to have fewer friends and relatives in the same street than the average for the Borough. In comparison, the older and more remote Neighbourhoods show signs of a greater independence of the Centre, and a greater consciousness of belonging to the Town as a whole, which, it is interesting to note, is to some extent stimulated by the negative attitude of discontent with the present semi-detached housing. Obviously, good housing (taking Priory Hill as good from the point of view of the individual house) does not necessarily create a feeling of contentment or a tendency to participate in social life. It is relevant to remark at this point, that overcrowding threatens to become a source of anxiety in this district. The three and four bedroomed houses which predominate are not intended for the accommodation of what are termed in the Housing section of this Report "Concealed Households," i.e., families composed of married children living with their parents, or even for the large family. As no steps are taken at present to remedy these defects by allotting families of various sizes to suitable houses, or by any other method, this problem is likely to continue in the Neighbourhood for many years.

A troublesome social problem has to be faced in the Neighbourhood in so far as neither an old-established physical centre nor a living social tradition exist, as they do in most of the other Neighbourhoods. Priory Hill possesses schools, shops, churches and associated youth clubs, and a clinic, but they are not related to each other so as to form a nucleus of social amenities or an area of activity which is complementary to that of the Town Centre. Furthermore, a collection of people has been grouped together in this Neighbourhood who have nothing in common except the urgency of their needs which placed them high on the priority lists of the Housing Department. The emphasis has been from the beginning on the individual dwelling, and the needs of the individual family, rather than on the promotion of good social relationships without which satisfactory standards of family life are impossible. Priory Hill thus forms a community of people who

have yet to find their common interests and it is regrettable that so far few attempts have been made to foster and encourage them.

Under such conditions people tend merely to be glad that they have a roof over their heads and reasonable space in which to live. The element of personal choice or liking for the Neighbourhood has been largely eliminated, and the feeling of pride in belonging to a Neighbourhood is similarly absent. During the course of the house-to-house survey the interviewers quickly became conscious of this. Priory suffers from the fact that its inhabitants do not particularly wish to be identified with the area, which has the reputation of being inhabited by people who have lived in slums, and is not in some parts of it well kept by the tenants even at the present time. The majority of tenants resist any further identification with this minority than has already been forced on them.

Redevelopment schemes might well, therefore, concentrate on an attempt to consolidate the social and recreational services as far as possible, the most promising area being that where the present school and clinic are placed in Cedar Road, which is between the two bus routes to the centre of Dudley, and at the junction of the Priory and Wren's Nest sections of the estate. It is near to the Priory Road shops, and the convergence of the routes to the Town adds to its importance. The estate is badly in need of this centre, and this will be emphasised when the Old Park housing scheme, now in process of construction, begins to function. The "pull" of the Town Centre is now sufficiently strong to make it probable that it will attract the new community for recreational and shopping purposes. Development in a direct line with this flow should add considerably to the interest of the Estate, which at present derives its character from the similarity of its housing types on the one hand and its pleasant site on the other.

The Priory School is well placed to serve both the Priory and the Wren's Nest Estates, being close to the main road into the centre of Dudley, and unless this building is required for adult education every evening of the week, it could be used to house a mixed club until such time as other premises are made available. The Club should, of course, be a local responsibility, but the initial steps toward its formation might be taken by one of the Youth Organisers in co-operation with the school staff; this experiment might well serve as a pattern for further development in other Neighbourhoods.

The urgency of the need for additional facilities for youth work is demonstrated by the fact that the figures for juvenile delinquency are very much higher in this area than in any other. This suggests that sufficient opportunities are not provided for young people to satisfy their need for constructive activity. An analysis of the background of the young offenders reveals unsatisfactory home conditions in the majority of cases, ranging from the too large family or parents unable to control their children, to the actually "broken" home. The causes underlying these conditions are many, but a contributing factor may well be the compulsory uprooting of families from an environment with which they are familiar and where the children have grown up. Their removal to an area which has none of the recognisable features of the old district, however drab they may have been, and which is inhabited by a group of people who have all suffered in one way or another from the effects of involuntary resettlement, cannot fail to have a disturbing influence on the children concerned.

In brief, the physical site of Priory Hill is most favourable to the creation of a socially healthy Neighbourhood. It is built on gradually rising slopes, which enable large areas of it to be viewed as a whole, and there is no sense of the vastness and uniformity such as a flat and extensive site frequently produces. Socially, it is in need of "pulling together" if it is to become more than a dormitory. There is no doubt that a great deal could be done to minimise the outward drift of social life, and to foster the growth of a stronger feeling of loyalty and affection for the Neighbourhood. That the task must be attempted is emphasised by the presence of certain symptoms of social ill-health which cannot but cause concern. This, however, should be regarded as a challenge; the situation is not without hope, and there is every reason to expect that it will respond to energetic treatment.

V. DUDLEY WOOD.

This name has been given for convenience of analysis to a somewhat scattered area between Dudley Canal and the Borough boundary, which forms a broad semi-circular band around the South of Netherton. Although this area has been defined as one Neighbourhood, it contains several small areas of housing interspaced by woodland and semi-derelict land; namely, the Lodge Farm Estate, the Darby End area,

which includes both old housing and a Local Authority Estate built during the inter-war period, and the area including Dudley Wood itself, between Halesowen Road and Quarry Road. The area includes both private and publicly owned houses. It is amongst this latter group that the small nucleus is coming into existence which justifies the definition of the whole area as a Neighbourhood, though it would, perhaps, be more correct to speak of Dudley Wood as a potential Neighbourhood, than as one which already exists. Though the area is undoubtedly showing a tendency to consolidate, it is still in a very early stage of development; it consists almost entirely of new property along a few roads which have not been planned to give it a coherence or unity, with the exception of those in and around Bowling Green. Most of the roads have been built as the result of piecemeal private development. Moreover, the older property is of little value; much of Darby End is scheduled for demolition, and when the roadway system is improved, the inhabitants of Lodge Farm Estate will tend to gravitate towards Netherton, which may become the centre of the social life of the Estate if a better alternative is not provided. The general impression gained from a superficial inspection of Dudley Wood is, indeed, one of open space, interspersed by new housing estates which have hardly yet been occupied, or taken definite shape, and of vistas of Saltwells Wood over the derelict land in between. The approximate population of the Neighbourhood, including all the three areas mentioned above, is 6,000. There is thus room for a large measure of expansion.

The Cradley Heath Sports Stadium in Dudley Wood is not strictly speaking a feature of local social life, as it attracts crowds from both Cradley and Dudley. The local School, a Chapel and a Mission Church, a Clinic and a service point of the Central Library are, however, all sited along the Road. which is becoming a definite social centre, in spite of the fact that the shopping facilities of Cradley Heath are more convenient and more extensive.

The material relating to Dudley Wood, collected during the Survey, shows striking differences from that referring to other Neighbourhoods. The use made of the Dudley shops is markedly small, even smaller than in Netherton, but this is only because Cradley Heath takes the place of Dudley as a shopping centre. A much higher proportion than in any other area of the Borough would prefer to live in the same area as they do at

present, and among the same people. Similarly, there is a significantly larger number who have relatives in the same street, and have personal friends among their neighbours. All this points to a high degree of satisfaction with the area as a place to live in.

This is of particular interest as it contradicts the common assumption that a high level of satisfaction cannot be obtained in a new and largely unformed area, which is remote from any particular centre. In Dudley Wood the converse of the situation in Priory Hill obtains, for the most significant factor contributing to this general sense of well-being would seem to be that more people are living there from choice rather than from necessity, and because they consider Dudley Wood to be a "good" district, in that the standard of housing is higher in the social as well as architectural sense. The "social value" of housing is an extremely important factor in the creation of neighbourhood ties, and many diverse amenities, such as convenient shops, transport or social facilities, will be gladly foregone, if a choice must be made between a "good" district with poor conditions, and a "bad" district where adequate amenities are available. If, however, it is always difficult to alter the reputation of an area it may be comparatively simple to add to its amenities. The Dudley Wood area would be greatly enhanced, for instance, by the provision of additional shopping facilities, which can be achieved without undue difficulty.

Dudley Wood is fortunate in that its physical rate of development has not outrun its social development. It is unusual to find an area which is not completely built-up and yet possesses the beginnings of a natural social grouping which could be fostered without excessive expenditure of time and money. The Neighbourhood is, therefore, offered a quite exceptional opportunity for joint action by its inhabitants and the municipal authorities, which should show rewards both quickly and abundantly.

VI. THE TOWN CENTRE.

The Town Centre comprises three areas which can be roughly defined as follows. In the first place, there is the Town Centre proper, between Ednam Road and King Street, on the one hand, and Stafford Street and the Station Hotel on the other.

This area contains the High Street with the market and the main shops, the Council House, Library, Art Gallery and Civic Restaurant, the larger hotels, the theatre and cinemas, and the Zoo entrance. The other areas adjoin the Centre; the first surrounds Wellington Road, and the second is situated below King Street, in the Flood Street and Bond Street area. These two areas are mainly composed of houses scheduled for demolition; they were originally the residential part of Old Dudley, but have now become a mixture of poor housing small works, and general shops.

None of these three areas have previously been considered in this Report, as they do not strictly fall into any grouping which could be called a Neighbourhood or even a potential Neighbourhood, being predominantly composed of business, shopping and administrative buildings. Residential property is intermingled with these buildings in a somewhat haphazard way, playing a very secondary part in relation to them in the Centre.

It is difficult to make an estimate without a large margin of error, but the population of the Centre as a whole may be put at approximately 3,000. The survey indicates that the three areas were not looked on with favour by their residents, as there was a low proportion in all of them of inhabitants who would prefer to live in the same district and among the same people. This is obviously a reflection of a poor standard of housing and a lack of residential amenities. As these areas are to be subjected to radical demolition, it is unnecessary to consider their potentialities as Neighbourhoods. It is obviously more profitable to discuss the Town Centre in relation to its true function as the focal point for the Neighbourhoods previously defined.

It is not surprising that Dudley Centre has such a strong influence over the Neighbourhoods and is so well used by them. It has all the basic requirements for a successful Centre, and they have been used to great advantage by the Civic Authorities. The outstanding feature is the degree to which the administration of the public services of the Borough as a whole has been concentrated at the Centre over a long period of time. The size of the Centre is sufficiently small to enable it to be grasped as a single unit; its physical unity is, indeed, not unimpressive. This admittedly creates problems of congestion, particularly of traffic, but they could be minimised by the construction of more efficient bye-pass roads, and the adoption of a policy of

decentralizing all but those services which can be more efficiently administered at the Centre.

The most outstanding achievement of the inter-war period has been the building of the new Civic Centre, and the layout of the surrounding roads and gardens, which symbolises the vitality and self-confidence of the Borough. The Council House, with its murals and stone bas-reliefs recording the historical associations of the Town, has taken the place of the Castle as the dominating feature of its social life. The Castle retains its prominent position on the Hill, though it has now been turned to public use as a Zoo which has become famous throughout the Midlands.

Within this small area are also the main cultural and educational services of the Borough. The modern Technical College will gain in importance when it undertakes the training of adolescents under the 1944 Education Act. The Town Hall, at which concerts are held, the Central Library, with its reference section, the Art School and Grammar Schools and Training School, are linked together into a group of buildings which give meaning and dignity to the civic life of the Town. A diversity of Youth Clubs and other social activities are attached to the numerous Churches and Chapels within the Centre. Co-ordinating many of the cultural activities of the County Borough is the Dudley Arts Club which was founded in June, 1947, and to which local cultural and artistic societies such as the Friends of Music Society, the Art Circle and the Library Society are affiliated. Individual members are also accepted at a minimum subscription of 2/6 a year, which entitles them to receive information on all the Club's activities, and to certain concessions with regard to tickets for plays, concerts, etc. The Club is represented on the Committee of the Council which manages the Libraries and Arts Centre.

Dudley Market is held in the Market Place, the centre of the shopping district which serves the Town as a whole, and affords a popular attraction for the inhabitants of the various Neighbourhoods. A comprehensive range of shopping facilities is provided, especially in the cheaper ranges of goods. Both individually owned shops and "chain" stores are represented. There are, however, no departmental stores, other than that of the Co-operative Society, and their absence is an important consideration, as many Dudley people are attracted to Wolverhampton and Birmingham by their shopping facilities. The Civic Restaurant fulfils an important function as it is the

only cheap restaurant which is available to the public after the shops have shut.

The Centre therefore provides for a diversity of interests, and possesses a unity which is both social and physical; it is remarkable for these qualities in a part of the country where one urban area merges into another, and only too often loses its identity in the process. This has not happened to Dudley, a fact which is due not only to the advantages of its physical structure, but even more to the wise use which has been made of them by its Council.

CONCLUSION

The foregoing pages contain a brief analysis of the present structure of Dudley's Neighbourhoods which justifies the conclusion that the Neighbourhood concept is applicable to Dudley, and the prospects of success are most promising owing to the solid foundations which already exist. The analysis may be taken to have demonstrated that much can be achieved without embarking on a programme of drastic expenditure or rebuilding. On the contrary, the spirit of neighbourliness, and the strong local feeling which the Survey revealed, are social assets of much greater value than mere bricks and mortar. The adoption of a policy of developing the existing centre of local life in each Neighbourhood, by encouraging the opening of additional shops and siting clinics, libraries and other public buildings there, would bring immediate returns in the shape of an increase in local self-respect. The lack of any such focal point was particularly evident in Dudley Wood, Kate's Hill and Priory Hill: in each case development on the lines suggested would, fortunately, be comparatively simple.

This policy would be immensely strengthened if to it were added a determined campaign on the part of the various welfare services to secure the co-operation and interest of the local residents. At present, no Neighbourhood can claim to have explored the full possibilities for the association of parents with teachers, of the staffs of clinics with the mothers attending them, or of readers with librarians, to name only the more obvious means which might be made use of to achieve this objective. Similarly, the good-will of the members of the various churches and chapels constitutes an asset of which more use might be made. Their services should be energetically enlisted

by the respective officers of the local authority whose duties bring them in contact with the problems of juvenile delinquents, the "bad" tenant, and so on. Their attention should also be drawn to opportunities for social service in regard to the conversion of derelict land for use as playgrounds, the provision of clubs for young and old, and similar community activities.

All the Neighbourhoods require further provision of facilities for community life, such as would be available at a Community Centre, though Netherton may be regarded as a partial exception to this. The needs of Priory Hill are most pressing in this regard and should, indeed, be met with all possible despatch. The possibility of developing the facilities of the Netherton Arts Centre so that it serves the purpose of a Community Centre might also be explored. Where building is not yet a possibility, sites should at least be reserved. Meanwhile, the existing provision of school and church halls, and other premises, should be used to its fullest extent. The possibility of developing the facilities of the Netherton Arts Centre so that it serves the purpose of a Community Centre provides an outstanding opportunity to make more effective use of existing facilities in this way.

Reference has repeatedly been made to the need for open spaces, particularly in Kate's Hill and Woodside: the difficulties involved should not be allowed to stifle individual efforts, on however small a scale, to meet this need.

On the question of the relationship between the Neighbourhoods and the Town Centre, there is a definite danger lest the attractions of the latter drain away the vitality which should give to each locality its individual character. This can only be countered by an increase in local loyalties such as the policy outlined above would do much to stimulate. On the other hand there seems little reason to fear that the life of the Town as a whole would suffer from a policy of Neighbourhood development provided that each Neighbourhood is brought into a co-operative relationship with the other neighbourhoods, and the services provided at the Centre are carefully planned so as to supplement those made available in the Neighbourhoods, rather than compete with them.

CHAPTER III.

THE INDUSTRIAL BACKGROUND.

I. INTRODUCTION.

The description of the topography of the district has already emphasised the importance of the part that it has originally played in shaping the development of Dudley's industries. As the natural resources became exhausted, however, the metal industry changed over (generally speaking) from the production of primary products to the finished or semi-finished articles, though iron smelting and some other old-established "heavy" or extractive undertakings still remain in Bilston, Netherton and Brierley Hill. As a whole, the Town's metal industries have been orientated for many years towards the later stages of manufacture. For example, Samuel Lewis & Co. were engaged in the manufacture of nails as early as 1750, records of which still exist in the Dudley Library. In 1838, chain making was established in Netherton by Noah Hingley, who manufactured wrought iron chains and anchors. Metal bedstead manufacture dates from 1846, and the first brochure advertising hearth furniture was published in 1865 from the Burnt Tree Works. The chief industries of Dudley in 1860 were the wrought-nail trade, chain and anchor manufacture, and the constructional engineering industries*. The important earlier processes to which these were linked were located close to the borders of the Town and were an additional source of employment for its workers. This tendency to specialise in the later processes is also characteristic in many ways of Birmingham's history, and the reason why Dudley failed in later years to build up a parallel and prosperous series of industries from these can perhaps be attributed to the comparatively sudden and catastrophic decline in the wrought nail trade.

Dudley has been the only town in this area that has seen the development of a clothing industry. The bedding industry, still carried on by P. M. Flanagan & Sons, Ltd., dates from about 1865, and the leather industry was started in 1852 by

* G. C. Allen. *The Industrial Development of Birmingham and the Black Country*, 1929 (p. 171).

J. A. Hillman, Ltd. These have never employed a high proportion of the town's workpeople.

During the period 1929-1937, two-thirds or more of the workers in the combined area of Dudley and Sedgley were employed in the following industries, as classified by the Ministry of Labour and National Service: Building and Decorating; Constructional Engineering; other Metal Industries; Bricks, Pipes, Tiles and other Fireclay goods; local Mining; Tailoring, and Retail Distribution. By 1946, General Engineering, Motor Vehicles, Cycles and Aircraft, and Local Government Service had also become important. At that date, 74% of the workers were engaged in these ten industries. Table II (page 53) shows the number employed in them between 1929 and 1946. *

It is difficult to draw any firm conclusions from these figures both because the numbers employed by each industry are small, and because it is possible that there has been to some extent a redistribution of individual firms between the various industrial classifications between 1937 and 1946. For example, the introduction of the Motor Vehicles, etc., classification in the latter year may well be due to a reclassification of firms in "Metal Industries Not Separately Specified," the number of which declined markedly. Again, although 1929, 1931 and 1937 were selected as significant years in the trade cycle by the West Midland and North Staffordshire Planning Research Group for purposes of illustration, comparisons with the figures for 1946 appear to be dangerous, as this year is too close to the last war to enable reliable conclusions to be drawn which are free from temporary influence. It does seem clear, however, that employment in the extractive industries has declined in relative importance because of the gradual exhaustion of mineral resources, that Building and Decorating, the Distributive Trades and Local Government Services have broadly followed the national pattern, and that employment in Constructional Engineering has remained steady over the years under review.

The figures indicate an increase in the diversity of local industries in recent years. This, however, has not developed over a long period and it can hardly be said that Dudley's

* As the area of the Local Office of the Ministry of Labour and National Service covers both the Borough of Dudley and the Urban District of Sedgley, it is unfortunately impossible to obtain separate employment and unemployment statistics for Dudley from this source.

Table II.
Number of Insured Workers Employed in
Industries in Dudley and Sedgley.

	1929		1931		1937		1946	
	Numbers employed	% of all workers	Numbers employed	% of all workers	Numbers employed	% of all workers	Numbers employed	% of all workers
Building and Decorating ..	393	5.6	1,461	7.3	1,759	9.4	743	6.0
Constructional Engineering ..	585	3.5	712	3.5	748	4.0	645	3.5
Metal industries not separately specified ..	2,506	14.8	2,598	12.9	2,899	15.4	1,789	9.6
Bricks, Pipes, Tiles, Fireclay goods	1,648	9.8	1,757	8.7	1,947	10.4	799	4.3
Coal Mining ..	2,298	13.6	2,541	12.6	1,869	10.0	1,751	9.4
Tailoring . .	1,353	8.0	1,461	7.3	1,222	6.5	738	4.0
Retail Distribution	2,074	12.3	2,209	11.0	2,460	13.0	2,532	13.6
General Engineering ..							2,370	12.8
Motor Vehicles, Cycles, Aircraft							1,130	6.1
Local Government Service ..							872	4.7
Total	10,857	67.6	12,739	63.3	12,904	68.7	13,369	74.0
Total Employed in all industries in Dudley and Sedgley ..	16,892		20,138		18,788		18,558	

industrial structure has become appreciably better adapted in recent years to withstand a possible future trade recession. Indeed, what has in the past been the most obvious diversifying factor, the Tailoring Trade, has experienced a steady decline in relative importance over the whole of the period under review. It may of course be possible that the downward trend in the industry may be due to the operation of temporary factors and consideration might profitably be given to this problem. Dudley was cited in *Conurbation* and *The West Midlands Plan* as one of the black spots of unemployment in the Black Country between the two wars, if not the worst of them. Table III (page 55) shows unemployment in the Conurbation for the years, 1931-1938.

It can be deduced from the above Table that the unemployment from which Dudley has suffered, is closely connected with the prosperity of the Iron and Steel Industry, particularly during the 1930s; indeed, the effect has been even more marked in Dudley than in the more notorious "black spots" of unemployment, of which South Wales is a good example. Employment both in Dudley and South Wales was primarily determined by the prosperity of the heavier industries, though unlike South Wales, recovery in Dudley was more rapid.* In the months of January, August and October, 1931, the unemployment rates in Dudley were 42.4%, 41.4% and 41.6% of the total insured population; the average for that year was 38.8% but thenceforth unemployment fell off more rapidly than in Wales and Scotland.

These figures must not be accepted without criticism, for although unemployment in Dudley has undoubtedly reached high levels and the problems associated with it have been none the less real, it seems likely that the evidence has been somewhat exaggerated. Both the above Tables are based on the Local Unemployment Index, and it must be remembered that large numbers of the population are known to work outside the Dudley and Sedgley Exchange Area. It is therefore probable that many unemployed persons have registered at the Dudley and Sedgley Office, which was nearer their homes than the Office at which their insurance books were exchanged. The figure of 6,845 workers registered at the Dudley and Sedgley

* Seasonal fluctuation in employment is not marked in the Conurbation as a whole; only five of the local industries are in fact liable to be affected and this seasonal unemployment does not appear to have had a particularly significant influence during the years of depression.

Table III.*

Unemployment Rates for 1931-38 for Exchange Areas within the Conurbation compared with Great Britain (Rated in order according to severity of unemployment, in 1931).

Area	Average for 8 years	Average of Monthly Percentage Rates							
		1931	1932	1933	1934	1935	1936	1937	1938
Great Britain ..	16.9	22.0	22.2	20.3	17.3	16.2	13.9	10.7	12.7
Dudley & Sedgley	21.6	38.8	34.6	21.7	21.2	18.2	13.8	9.3	14.8
Cradley Heath ..	20.3	36.3	31.8	25.0	18.4	14.1	10.4	8.6	17.9
Wednesbury ..	21.8	35.7	36.8	31.1	20.8	18.2	11.7	7.1	12.7
Brierley Hill ..	19.0	33.2	29.5	24.7	17.9	14.6	10.2	8.1	3.4
Bilston	18.5	31.8	29.0	24.5	16.4	14.0	10.1	8.4	14.5
Darlaston ..	15.6	28.6	27.9	22.8	13.7	10.4	6.4	6.7	8.5
West Bromwich..	15.4	28.6	27.1	21.6	12.3	11.3	7.9	5.2	9.4
Walsall	18.6	28.4	26.6	24.6	18.1	14.4	11.5	9.4	16.3
Sutton Coldfield	14.6	27.7	23.3	22.9	12.3	10.4	7.3	6.2	7.1
Tipton	16.5	27.2	27.6	23.6	14.7	12.3	8.3	6.8	11.1
Stourbridge ..	18.6	27.2	26.5	24.3	17.4	15.4	12.4	11.0	14.7
Wolverhampton	16.7	27.0	25.0	21.8	16.1	14.8	11.2	7.3	10.6
Willenhall ..	15.5	26.3	25.6	20.7	14.9	11.5	8.1	5.6	11.2
Oldbury	13.4	23.6	26.6	20.2	11.1	7.0	5.2	3.8	9.2
Smethwick ..	10.5	18.9	17.5	14.5	9.5	7.5	5.0	3.7	7.2
Birmingham ..	9.6	17.7	15.3	12.1	8.1	6.6	5.2	4.3	7.7

* Derived from *Conurbation—A Study of Birmingham and the Black Country*, p. 198, by the West Midland Group, Architectural Press.

Exchange as unemployed in January, 1932, is probably a fairly accurate figure for Dudley County Borough and Sedgley Urban District, but the total insured population of 20,138 recorded for that area, on which the Unemployment Index of approximately 32% was calculated, is undoubtedly an underestimate of the number of insured workers living in the area covered by the local office of the Ministry of Labour and National Service.

If it were possible, therefore, to correct the official estimates by transferring the employment records of workers to the area in which they reside, the effect would be to increase the numbers of insured workers in all the smaller towns which provide part of the labour force in the larger manufacturing centres, and consequently to reduce the percentages calculated as unemployed. This would make it necessary to alter the order in which various Towns and Districts appear in Table III, and it is extremely doubtful whether Dudley would then occupy so high a place in the list.

Unemployment in Dudley during the 1920s has been attributed to the "depression of the heavy iron and steel trades, especially wrought chain."* The cyclical fluctuation in the heavy manufacturing industries, together with the slow decline in the extractive industries, created the core of unemployment suffered during the 1930s; this presents a problem in industrial readjustment which has yet to be solved, although the outward symptoms of it are, at the present time, so much less obvious. The degree to which Dudley's industrial structure can be modified to meet this problem depends on many considerations, among them the skills of the present and future labour force, the future needs of existing industries, their connections with other industries, their adaptability to change, and the character and mobility of new industries. One thing however, is certain—Dudley is committed to a policy that must be fully integrated with that of the area generally, and little can be done by the Town, in isolation from its neighbours, to overcome any economic difficulties that may arise in the future due to lack of balance in distribution of employment in local industries.

I. THE SOCIAL RESPONSIBILITIES OF INDUSTRY

In addition to the problem of creating more stable employment, there is also a further responsibility of industry that must

* G. C. Allen, *op. cit.*, p. 226.

be considered, namely, the need to make adequate provision for the human needs of the workers. Most workpeople spend one-third of their day at their place of employment. The importance to them of the nature of processes that are carried on, and the amenities that are available are obvious, for not only is their state of health and their way of life directly affected by them, but their interests, their friendships and their social position in the community are largely determined by the work they do and the place they do it in. The planner must, for instance, bear in mind that the attractiveness or otherwise of a factory building may affect the level of morale of those employed within it. Although excessive expenditure on appearance may have a bad effect, particularly where wage rates are low, both executives and industrial workers like to be able to refer with pride to their factory or office. The aim, therefore, should be to create factories that are pleasant places to work in, but are not necessarily ostentatious or extravagant.

The extent to which an individual can find opportunity for self-expression in his employment may, indeed, determine the whole pattern of his day-to-day life almost as much at home as at work. Planning, therefore, should include within its aims the promotion of the welfare of industrial workers. Opportunities for employment, rates of wages, prospects of promotion, types of training available, pensions, conditions of work and the amount of respect which a worker commands in the eyes of his neighbours by virtue of the work that he does, all these are matters in which the community as a whole should be vitally interested.

II. OCCUPATIONS OF DUDLEY INHABITANTS

Consideration may now be given to the occupations of the people who live in Dudley, and to the extent to which they find employment in the town. A limited amount of information was obtained from the official records and statistics of the Ministry of Labour, and some additional statistics were found in *Conurbation* and in the *West Midland Plan*. The Ministry's statistics, however, relate to the combined area of Dudley and Sedgley, and this greatly reduced their value for this purpose. The information available from these sources failed to give an adequate picture of the situation as a whole, and it was necessary to rely almost exclusively on the material obtained through the Sample Survey.

From this material it has been estimated that in 1949, the number of insured workers residing in Dudley was 28,300. The total occupational composition of the population over the age of 15 is shown in Table IV. It must be borne in mind, however, that this Table does not give an accurate estimate of the number of persons actually employed in Dudley because it is calculated that out of this total, 16,850 work in the Town and 11,480 work outside. Moreover, the daily outward movement is balanced to some extent by an inward movement, which is hard to measure exactly, but which may be taken to be approximately 3,200. It is reasonable, therefore, to suppose that the total number of persons employed in Dudley is about 20,000.*

Table IV.
Type of Employment :
(Persons aged 15 years and over).

Category	Sample Survey		Estd. living in Dudley
	Number	%	
Full-Time employment	350	54.9	26,090
Part-Time employment	30	5.2	2,240
All employed	380	60.1	28,330
Housewives	220	34.5	16,400
Others not in gainful employment	35	5.5	2,610
	635	100	47,340

The occupations of those interviewed have been classified into the main employment groups. Table V shows the percentage distribution of those groups, while Table VI shows a further breakdown of the group classified as "Manufacturing" in Table V. Diagram I shows the comparison between the

* This point is discussed more fully below, see p. 80.

DIAGRAM I
PERCENTAGE OF WORKERS IN EACH INDUSTRY IN 1949*
(DUDLEY AND ENGLAND AND WALES)



* Source
CMD 7647

percentage distribution of the occupations of those interviewed in Dudley and that for England and Wales. It must be emphasised that, as those who were interviewed lived in Dudley but did not necessarily work in the Town, Tables V and VI do not provide any information as to the distribution of those employed in the various industries of Dudley itself.

Table V.
Industrial Classification.

Category	Number	%	Sampling Error
Manufacturing	217	57.1	± 5.0
Transport and Shipping ..	14	3.7	± 1.9
Mining and Quarrying ..	5	1.3	± 1.1
Gas, Water and Electricity ..	9	2.4	± 1.6
Building and Civil Engineering	35	9.2	± 2.9
Agriculture and Horticulture	4	1.1	± 1.0
Distributive Trades	50	13.2	± 3.4
National and Local Government	23	6.1	± 2.4
Professional, Financial and Miscellaneous Services ..	23	6.0	± 2.4
All Employed	380	100.0	
Not in Gainful Employment ..	255		
Total in Sample	635		

It is interesting to note that the "Professional and Miscellaneous Services" group in Dudley is one-third of the size it attains in the country as a whole. This suggests that the community may in some measure be out of balance, and further

enquiry should be made to discover whether this is, in fact, the case. An explanation may be that many doctors, dentists and other professional workers live outside the Town but

Table VI.
Analysis of Manufacturing Industries.

Category	Number	%	% of all employed	Sampling Error
Iron and Steel Manufacture ..	39	18.0	10.3	± 3.0
Engineering and Ship Building ..	87	40.1	22.9	± 4.2
Vehicles	17	7.8	4.5	± 2.1
Textiles and Clothing	16	7.4	4.2	± 2.0
Bricks, Pottery and Glass	23	10.6	6.0	± 2.4
Furnishing	6	2.8	1.6	± 1.2
Chemicals	3	1.4	0.8	± 0.8
Food, Drink and Tobacco	5	2.3	1.3	± 1.1
Miscellaneous ..	21	9.7	5.5	± 2.3
All Manufacture ..	217	100	57.1	± 5.0
Other Employments	163		42.9	± 5.0
All Employed ..	380		100	

practise in it. Even if this is so, the low proportion of those who actually live in Dudley must be a cause of some concern, as it can safely be assumed that its social and cultural life is likely to be weakened if its uniformity outweighs its variety. It is

known that some of the senior officials of the Local Government live outside, though the proportion of National and Local Government officials who live in Dudley approximates to the national figure.

Table VII.
Classification by Occupation.

Category	Number	%	Sampling Error
Administrative—Managerial ..	21	5.5	± 2.3
Clerical—Semi-skilled ..	40	10.5	± 3.1
Clerical—unskilled	11	2.9	± 1.7
Supervisory—Industrial ..	14	3.7	± 1.9
Manual—skilled	65	17.1	± 3.8
Manual—semi-skilled ..	163	42.9	± 5.0
Manual—unskilled	48	12.6	± 3.3
Professional	18	4.7	± 2.1
All employed	380	100	
Not in gainful Employment	255		
Total in Sample	635		

It is also a striking fact that the percentage of workers employed in the manufacturing industries is higher in Dudley than in the country generally; at the end of 1949 these industries provided employment for more than half of Dudley's working population.

The proportion of those employed in the Distributive Trades is much the same as the national level.

The building and civil engineering trades also have a high employment figure but this industry is generally known to be especially liable to fluctuation. The proportion of workers employed in the public utilities, on the other hand, appeared to be only a little above the national average, but little reliance can be placed on these figures, because the industries concerned were in the middle of organisational changes due to nationalization at the time under review.

In Mining and Quarrying, the low numbers employed may be due to the labour problems that exist in the extractive industries generally.

The employment of those interviewed was also analysed into occupational categories. These are shown in the following Table.

These occupational categories were arbitrarily determined according to the following definitions :—

- | | | |
|---|----------------------------------|---|
| 1 | <i>Administrative Managerial</i> | All employed in industry of " executive " status. All in complete control of commercial undertaking, shop or administrative department. |
| 2 | <i>Industrial Supervisory</i> | All not included in the first category who hold any position supervising others in industry. Commerce, retail distribution and public service. |
| 3 | <i>Clerical Unskilled</i> | All employed in routine clerical work, not requiring any period of training. |
| 4 | <i>Clerical Skilled</i> | Accountants not included in 1 or 2 above, Bookkeepers, Shorthand-typists, and other clerical workers not included in the " Clerical Unskilled " category. |
| 5 | <i>Professional</i> | Members of any occupational group traditionally afforded " professional status " by the community generally. |
| 6 | <i>Industrial Skilled</i> | All apprentices, craftsmen, recognised as " skilled " by their respective trade unions. |
| 7 | <i>Industrial Unskilled</i> | Industrial workers receiving the minimum rate for unskilled workers or labourers in their respective industries. |
| 8 | <i>Industrial Semi-skilled</i> | All industrial workers not covered by 6 or 7 above. |

The classification of industrial workers into the three categories Skilled, Semi-skilled and Unskilled is a commonly

accepted practice, but it has disadvantages in that its use fails to reveal many skills and abilities. Many of the workers in the small enterprises which are so common in Dudley have come to possess special skills which are required in little known trades, though they may not have served a formal apprenticeship, or undergone any course of technical instruction. Some of the operations in the manufacture of galvanised holloware and hearth furniture, for instance, require skill of this type, but the employees concerned do not acquire a recognised status as skilled workers because no formal apprenticeship or training scheme is in operation for the trade in question. Furthermore men are employed in many small enterprises as "labourers" and are classified as unskilled, whereas in fact they may possess a high degree of industrial aptitude. It is no surprise to find in Dudley that on one day a worker may be operating a machine tool, on the next mending a brick wall, and on the day after sweeping the premises.

The survival of the "general workman" in the small organisations runs counter to modern developments in industry generally, where specialization in trades and occupations has taken place. It may also be regarded as the reason for the fact that, as will be shown later, Dudley is not very highly organised in the Trade Union field. Although many Trade Unions have established branches in Dudley, the bulk of their members, particularly those in engineering, are employed outside the Town. It is interesting to note, however, that this relative freedom from demarcation disputes has not resulted in a more rapid expansion of industry in Dudley than in neighbouring districts.

Thirty-five of the sample interviewed were placed in either the Managerial or Industrial Supervisory groups. Of these only thirteen were employed in the manufacturing industries. The figures are not large enough to make it possible to base any firm conclusions on them, but the number of these posts seems small in relation to the number of industrial workers interviewed; this may perhaps be due to the fact that, as has already been pointed out, many of those in the higher income groups employed in Dudley live outside the Town. As might be expected, the larger proportion of the skilled industrial workers (40 out of 65) are in the Engineering and Metal Trades.

The following Table shows the occupational groups analysed by the age structure of the working population. Again the figures in the Table are small and not, on the whole, very

TABLE VIII

Occupational Classification	Total	AGE					
		15-24 years	25-34 years	35-44 years	45-59 years	60-64 years	65 & over
Administrative—Managerial	21	—	2	7	7	3	2
Administrative—Semi-skilled, clerical ..	40	21	6	5	6	—	2
Administrative—Unskilled, clerical	11	4	2	1	3	1	—
Industrial—Supervisory	14	1	3	2	6	1	1
„ —skilled	65	10	19	15	16	3	2
„ —semi-skilled	163	42	40	45	27	5	4
„ —unskilled	48	8	7	8	20	2	3
Professional	18	5	4	5	2	—	2
Total Workers	380	91	83	88	87	15	16

Table VIII.

revealing, but they suggest that the Administrative and Managerial group tend to work later in life than the other groups, and that nearly half the unskilled labourers and general workmen are over 45 years of age. This may be due to a tendency that operated during the depression years for the younger men to enter unskilled occupations. The question is an interesting one, and it is unfortunate that no further light could be thrown on it by the evidence made available by the Sample Survey, which could not be extended to the collection of individual case-histories.

III. THE PLACE OF WORK

As much information as possible was collected during August, 1950, from the local offices of the Ministry of Labour and National Service, the Rating Department of the Local Authority, and the Chamber of Commerce, about the size and location of the factories situated in Dudley. Diagram II has been prepared from this information which shows the number of firms and the size of the labour force employed in all industries, in commerce and in retail distribution, and demonstrates that the typical industrial firm in Dudley is a small one. It will be noticed that out of a total of 582 firms listed, 350 employ less than 10 people, and that there are very few large firms in the town. The prevailing pattern of the Black Country as a whole is followed except that the proportion of very small firms is somewhat higher in Dudley than it is elsewhere. It can therefore be concluded that the typical opportunities for industrial employment in Dudley are in relatively small firms.

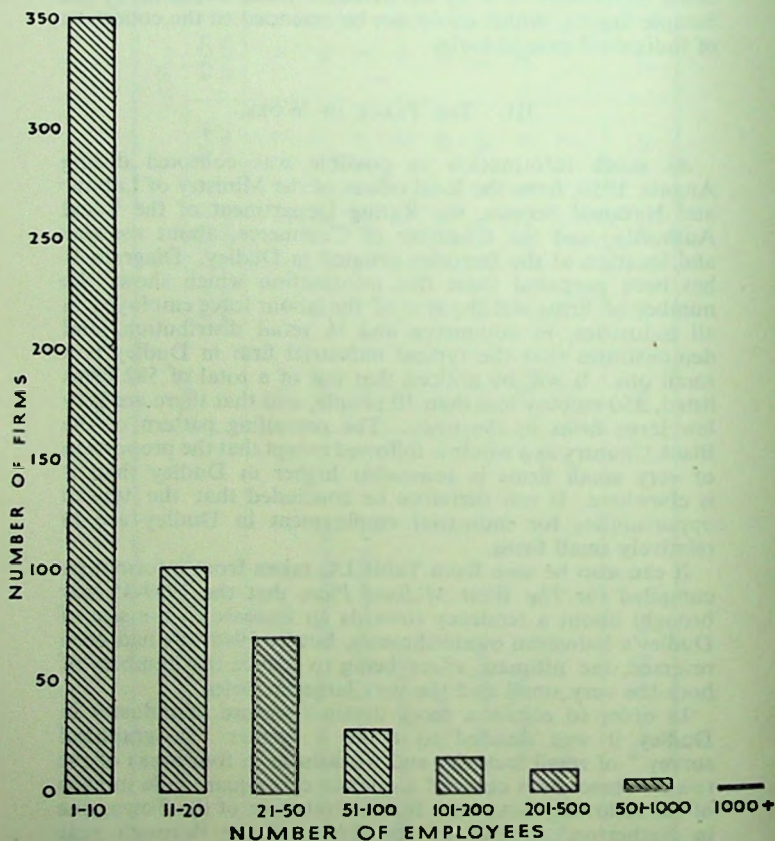
It can also be seen from Table IX, taken from information compiled for *The West Midland Plan*, that the 1939-45 war brought about a tendency towards an increase in the size of Dudley's industrial establishments, but by 1948 this had been reversed, the ultimate effect being to reduce the numbers of both the very small and the very large factories.

In order to obtain a more detailed picture of industry in Dudley it was decided to make a further "geographical survey" of small factories and workshops in four areas of the town. These areas covered a quarter of a square mile in each of the following districts : the Central Area of the Town, one in Netherton, another on the fringe of the Borough near

DIAGRAM II

DISTRIBUTION OF INDUSTRIAL FIRMS
BY NUMBERS EMPLOYED

(INFORMATION COLLECTED IN 1950)



Cradley Heath, and the last on the boundary between Tipton and Dudley.

The first area included two sub-areas, one of which contained portions of three main roads, Wolverhampton Street, Stafford Street and High Street. Industry was very scattered over the area and varied in its nature, and the whole district presented a congested and somewhat dilapidated appearance.

Table IX.
Size Distribution of Dudley's Factories.

Year	Percentage of Factories with a Labour Force of:—								Total
	1-10	11-24	25-41	50-99	100-199	200-399	400-749	750-1,449	
1939	55.8	15.6	7.6	8.9	5.4	4.9	0.9	0.9	100
1943	51.3	20.6	9.0	6.0	6.7	3.3	1.6	1.6	100
1948	51.8	23.9	9.9	6.0	4.4	1.6	1.6	0.6	100

The second central sub-area comprised the district adjoining the National Works; it was found to contain numerous small industries, and has been scheduled for further industrial development. Industrial premises cluster around the Works, creating a honeycomb of industrial units of varying size and type. A belt of factories and workshops also runs behind Hall Street and Waddam Pool on the north side of the area.

The second area, in part of Netherton, includes six industrial premises intermingled with small cottages in winding passages or "folds."

The third area, on the fringe of the Borough near Cradley Heath, contained two distinct sub-areas. The first, south of but excluding the Birmingham Road, failed to reveal any industry at all, but the second sub-area, north of and including the Birmingham Road, was mainly non-residential. The fourth area on the Tipton Boundary is in the main occupied by the factory and sports field of Messrs. Ewatts, Ltd., together with two other industrial units housed in makeshift buildings which have been converted for the purpose.

The survey as a whole revealed that industrial premises were scattered rather haphazardly in all the districts of Dudley which were examined. As many of these premises were originally designed for other purposes than those to which they are now put, extensive adaptations have sometimes been undertaken, frequently with only partial success. Moreover, this dispersion has involved a relatively wasteful use of the land, as some parts of industrial premises, such as yards, tend to be used for unimportant purposes, or even hardly used at all. The scattering of industry over a wide area also lowers the overall efficacy of land use, as it often makes it difficult to combine several small sites into a smaller number of larger ones, and an industry may find itself in occupation of more and than it really requires for this reason.

The above conclusion is borne out by statistical analysis. It has been estimated that 389 acres are used for industrial purposes out of a total of 4,066, or 9.6% of the whole. Assuming that the working population employed in Dudley's industries is 20,000, 58 persons are employed per acre of industrial land. This appears to be a somewhat low figure. It has been calculated recently on the basis of a Manchester survey that approximately 140 persons are employed per acre in that region in the General Engineering industry, and 154 in Mixed Manufacturing. This comparison is interesting, but it is, however, by no means conclusive. In the first place, it must be recognized that both these industries utilise a wide variety of processes which may employ workers at correspondingly different densities. Secondly, it may be thought that a more satisfactory comparison might be made between Dudley and areas of new industrial development or of redevelopment, rather than with Manchester as a whole. In areas which are redeveloped, the density figure should, it has been suggested, be reduced by a third, and by one-half when entirely new development schemes are required.* The density figures for Dudley must be regarded, therefore, as not unduly low, but when the overall efficiency of Dudley's industries and the amenities available to their workers are considered in relation

* See J. K. Watson, "Space Needs of Industry," *Town & Country Planning*, August, 1950, p. 319. Iron and Steel Smelting, it should be noted, occupies ten times as much space as General Engineering. In the New Town plans calculations are usually based on the assumption that 50 persons can be employed on each acre devoted to industrial use; this is a *gross* figure, however, and includes open spaces, roads, etc. The *net* figure varies very widely between different industries.

to those which are usually found in newly built factories which only provide employment for 50 workers per acre, it can only be concluded that there is a substantial amount of space available for their reconstruction on more modern lines on existing sites, or for the adaptation of parts of these sites as playgrounds or small open spaces, if they are not required for "amenity" purposes.

IV. THE EMPLOYMENT OF YOUNG PERSONS.

The information available from the Sample Survey did not make it possible to estimate the numbers of young persons

Table X.*

Dudley Industries Providing Apprenticeship Schemes and Day-release for Further Education.

Industry	Total Numbers of Employers	Apprentice- ship Schemes	Further Education
Engineering, Iron and Steel	124	11	29
Electrical Industries ..	13	3	4
Building and Wood- working	66	5	4
Mining, Quarrying, Clay Products ..	14	—	5
Textiles, Clothing, Leather,	38	1	8
Transport	19	—	2
Govt., Professional, Commercial	92	7	11
Distributive and Allied Trades	201	5	10
Others	8	3	1

* Figures extracted from a Survey carried out by the Youth Employment Service in 1948.

employed in Dudley industries, as the number of interviews in the 15-18 age group was very small. The Youth Employment Service, however, was able to supply information on this point. In July, 1948, when the last available count of insurance cards took place, the total number of insured workers under the age of 18 was 2,093, compared with 3,279 in 1939. There is a consistent demand for juvenile labour and therefore no unemployment problem for young people leaving school has arisen in recent years. The effective juvenile labour force is less than the figures indicate because a small but increasing number of employers offer day release for part-time education and so lose the services of their younger employees for part of each week.

Table X shows the proportion of employers in Dudley who have initiated apprenticeship or training schemes or offer facilities of day-release for further education.

The Distributive Industries, which employ a high proportion of Dudley workpeople, appear to have made few attempts, as yet, to provide opportunities for further training.

A considerable proportion of the young people leaving school in Dudley obtain employment outside the Borough. The following Table shows the placing of Dudley's school leavers by the Youth Employment Service, over the period 1944-49. It must be remembered that these figures only refer to those who sought the services of the Youth Employment Bureau, and do not include those who succeeded in finding employment for themselves.

	1943/4	1944/5	1945/6	1946/7	1947/8	1948/9
Placed in Dudley ..	1905	1952	1745	1302	924	1113
Placed in outside area	530	575	571	246	229	342

Table XI shows the industries in which male juvenile workers were placed during 1943-9.

These Tables show clearly that a considerable number of young people seek employment outside Dudley: this is a matter of some concern to the members of the Youth Employment Committee, as Dudley is drained of some of its potential skilled labour in this way. There are few large industrial organisations in Dudley, so that the scope for the employment of apprentices is limited. There are, however, a number of such organisations outside the boundaries of the Town, which offer opportunities of this kind, and parents with vivid

memories of acute unemployment during the years of depression naturally encourage their children to take advantage of them. The feeling of greater security from industrial depression

Table XI.*

**Placings of Male Juvenile Workers During Period
1943-49.**

Type of Industry or Occupation		Number of Placings		Percentage	
	Total	Inside Dudley	Outside Dudley	Inside Dudley	Outside Dudley
Engineering, Iron and Steel ..	3,637	2,654	983	73.0	27.0
Electrical Industries	47	21	26	44.7	55.3
Building and Woodworking	861	709	152	82.4	17.6
Mining, Quarrying and Clay Products	288	224	64	77.8	22.2
Textiles, Clothing and Leather ..	217	207	10	95.4	4.6
Transport ..	351	312	39	88.9	11.1
Govt. Professional and Commercial	516	363	153	70.4	29.6
Distributive and Allied Trades ..	405	373	32	92.1	7.9
Other Occupations	259	206	53	79.5	20.5
Total	6,581	5,069	1,512	77.0	23.0

obtained in this way may be mistaken, but it certainly appears to influence to a marked degree the present flow into industry. Furthermore, the small Dudley firms offer few opportunities

* Figures extracted from Annual Reports of the Youth Employment Bureau.

for specialization and only restricted avenues of promotion. This contrasts somewhat unfavourably with those in technical and administrative fields available in the larger industrial organisations.

The Dudley and South Staffordshire Technical College provides excellent facilities for vocational training and further education, and a high proportion of young workers take advantage of the opportunities offered. The College is used by some two hundred organisations widely distributed between Birmingham and Wolverhampton, but by far the larger proportion of students come from firms outside Dudley, which suggests that employers within the Town do not offer much encouragement to their young workers to seek further education.

Table XII shows the number of full-time students of the Technical College, and of the two Grammar Schools, who were placed in employment between 1943 and 1949.

Table XII.*

Further Education ..	106	Clerical	388
Engineering ..	405	Distributive Trades ..	18
Laboratory Workers ..	66	Nursing	24
Architecture & Surveying	6	Miscellaneous ..	106
Farming	2		

V. THE EMPLOYMENT OF WOMEN.

Several of the distinctive industries of the Conurbation employ a high proportion of women, particularly Cocoa and Sugar Confectionery, Saddlery and Leather Wares, Jewellery, Bolts, Screws, etc., Non-ferrous wares, and the large group of "other metal industries." These industries, it has been pointed out, "balance" the other local industries such as Iron and Steel, Railway Carriages and Trams, Constructional Engineering and Iron and Steel Tubes, which employ few women. But the balance is not evenly distributed over the whole area, and it has been recommended that industries employing a higher proportion of women should be developed in the Western belt, which includes Dudley.†

* These figures are again obtained from the Youth Employment Bureau's Annual Reports and include only those who sought its services. There are no figures available to indicate the numbers of those placed outside Dudley or who found their own employment.

† *Conurbation*, Chapter VIII, p. 128.

So far as the Conurbation as a whole is concerned this recommendation may well hold good, but it has only a very limited application to Dudley. Table XIII shows the percentage of women employed of the total insured population calculated on the basis supplied by the information obtained in the sample interviewed in 1949.

Table XIII.

Employed Population.

	Number	Per Cent.	Error %
Males	268	70	± 5
Females	115	30	± 5
Total	383	100	

The Table indicates that between 25% and 35% of the employed population are women. While this is a fairly large margin of error, the figures fall within the percentage range for the country as a whole, which suggests that the percentage of employed women is in no way abnormal and the case for extending the employment of women in the Town is correspondingly weakened. This conclusion is borne out by the employment figures for individual industries. Table XIV compiled from information obtained from the Ministry of Labour and National Service gives the occupational distribution of the women employed in the main industries of Dudley and Sedgley in 1948. The percentage of women employed in these industries is again similar to that of the country as a whole, though certain industries, notably Motor Engineering (vehicles), Gas, Electricity and Water, and Tailoring show a higher percentage than the national average.

As can be seen from the Table the majority of women are employed in three groups of industries, Distributive Trades, Clothing, and Engineering and Metal Trades; of these the Clothing Trade employs the highest percentage of women. This industry is divided in Dudley into two main sections,

waterproof garments and the manufacture of light clothing; both of these are subject to the effects of fashion changes and seasonal fluctuations, waterproof manufacturing being most liable to seasonal influences. However, the consequent

Table XIV.

Women Employed in Dudley and Sedgley Industries in 1948.

Industry	Total Employed	Number of Females	% of Total Persons Employed
Clothing	1,009	697	69.1
Leather Goods ..	512	251	49.0
Distributive Trades ..	3,155	1,485	47.1
Motor Engineering ..	2,021	834	41.3
Miscellaneous Metals ..	2,229	651	40.0
Brush Making	822	281	34.0
General Engineering ..	1,392	255	18.2
Gas, Electricity, Water	339	59	17.4
Transport	635	84	13.2
Constructional Engineering	595	29	4.9
Building	1,381	41	3.0
Mining and Quarrying	1,789	13	0.7
	15,879	4,680	29.5

fluctuation in demand for female labour may not present the difficulties that at first seem to be indicated; many women for instance, prefer seasonal employment as their domestic responsibilities make full time work difficult.

It is probable that the demand for women workers will remain stable for some time to come; the Secretary of the local Employment Committee, for instance, reported in July 1948, that "the potential demand for women in the clothing industry is considerable," and that, if they were available, several hundred could be absorbed within a few months. The case for providing additional opportunities for employment is thus correspondingly weakened. As has been stressed earlier in this Chapter, however, it does not seem satisfactory to regard the County Borough as an entirely independent area for the purpose of industrial development, and it may well be that in the interests of the Conurbation as a whole, consideration should be given to the encouragement in the Dudley area of industries employing a high proportion of women. In this event it will probably be necessary to make provision for supplying these industries with a proportion of their women workers from outside the Borough. The difficulties that would have to be overcome in this regard hardly require emphasis. During the war, however, many suburbs overcame the problems of social co-operation and the emergency services were successfully administered. This presents the planner with both a problem and a challenge; wartime experience has shown what can be achieved, but it is now his task to attain this same goal even though it is not possible to make use of the incentives that were then available.

With the passing of time Dudley may become, first and foremost, a dormitory for workpeople employed outside its boundaries. A mere increase in the numbers travelling to work outside the Town and a greater daily dispersion of workpeople cannot, however, be regarded as a cause for serious concern. The social traditions of the Town are solidly established, and the existing industries will still remain as the foundation of the Town's industrial and social life in the future.

VI. THE JOURNEY TO WORK.

As was expected, the present enquiry has shown that there is a considerable amount of movement taking place every day, both into and out of Dudley. It has also been shown that the consequent problem as it exists in Dudley, a town of 64,000 people, is quite different from those usually associated with cities as large as Manchester or Liverpool. Previous studies*

* For example, K. Liepmann, *The Journey to Work*, Kegan and Paul, 1944.

have dealt only with towns of this size, and the facts that have been brought to light in Dudley are therefore a valuable addition to what is known about the problem.

The main source of direct information is the Sample Survey. The Survey, however, only covers residents in Dudley and

Table XV.

Location of Employment	Workers included in Sample Survey		Estimated Number Resident in Dudley
	Number	%	
Within Dudley	226	59.5	16,850
Outside Dudley	154	40.5	11,480
	380	100	28,330

Table XVI.

Distribution of Workers by Occupational Groups.

Occupational Group	No. of Workers included in Sample Survey			% *	
	In Dudley	Outside Dudley	All workers	In Dudley	Outside Dudley
Professional, Administrative and Managerial ..	29	10	39	75	25
Clerical—all grades ..	34	17	51	65	35
Supervisory—Industrial ..	9	5	14	65	35
Manual—skilled ..	33	32	65	50	50
Manual—semiskilled ..	87	76	163	55	45
Manual—unskilled ..	34	14	48	70	30
	226	154	380	59	41

* To nearest 5%. The figures do not justify greater accuracy.

provides no information about those who may work in Dudley but live elsewhere.

Table XV shows that two in every five of the workers living in the Town are employed outside the boundaries.

About 80% of those who travel out to work are manual workers, of whom some 50% are semi-skilled and 20% skilled. Table XVI shows for each occupational group the proportion who work in Dudley and the proportion who work outside. It will be observed from the Table that approximately one-half of the skilled and semi-skilled workers living in Dudley work elsewhere, but that the proportion of the unskilled is much lower, namely, 30%.

Table XVII.

Industrial Classification of Workers.

Industrial Group	Number of Workers included in Sample Survey			%*	
	In Dudley	Outside Dudley	All W'kers	In Dudley	Outside Dudley
Iron and Steel Manuf.					
Non-ferrous Metals ..	23	27	50	45	55
Engineering, Shipbuilding	33	43	76	45	55
Other Manufactures ..	55	36	91	60	40
Distributive Trades ..	46	3	49	95	5
Building and Civil Engineering	20	15	35	55	45
Government and Public Utilities	23	9	32	70	30
Professional, Financial and Personal Services	18	6	24	75	25
Others	8	15	23	35	65
Total	226	154	380	59	41

* To nearest 5%. The figures do not justify greater accuracy.

Table XVII classifies the workers according to the Industrial Group in which they are employed. More than half the workers engaged in Iron and Steel Manufacture and in Engineering are employed outside Dudley. Apart from

Table XVIII.
Persons Employed Outside Dudley
Direction of Travel.

Direction	Principal Places	Workers included in Sample Survey		Estd. number resident in Dudley
		Number	%	
E. & S.E.	Birmingham, West Bromwich Smethwick	47	12.4	3,500
S.W.	Brierley Hill, Stourbridge, Rowley Regis	46	12.1	3,430
N.E.	Walsall, Wednesbury, Tipton	39	10.2	2,910
N.W.	Wolverhampton, Bilston Tettenhall	17	4.5	1,270
—	Miscellaneous	5	1.3	370
	All working out of Dudley ..	154	40.5	11,480
	Working in Dudley	226	59.5	16,850
	All in Employment	380	100	28,330

workers in the Distributive Trades who, as might be expected, live closer to their place of employment, a substantial proportion of all workers seek their means of livelihood outside the Town.

Information about the direction and extent of daily travel obtained from the Sample Survey is presented in Table XVIII. It should be noted that only larger towns are listed, and therefore the actual dispersion is somewhat wider than a brief glance at the Table might suggest. Apart from Birmingham, which is eight miles away, most of these places of employment are within a radius of five miles from the centre of Dudley.

The survey included a question on the time occupied by the early morning journey to work. The distribution of the answers received is shown in Table XIX. Nearly half the workers took no more than twelve minutes to reach their work and about 70% took less than twenty-three minutes.

Table XIX.
Time Spent on Morning Journey to Work
(Sample Survey).

Duration (Minutes)	Number of Workers	% of Total
Nil	28	7
Up to 12	153	40
13—22	92	24
23—40	66	17
Over 40	41	11
All in Employment	380	100

Information on the cost of the return journey was restricted to 162 workers in the sample who used rail or public bus services. Of these, 63% spent less than 6d a day and 85% less than 1/- a day. Only two persons said that the cost of the daily return journey exceeded 2/-.

Clearly neither the time nor the cost of the journey to work is a very important problem to the residents of Dudley.

The Daily Movement into Dudley

Information on this aspect of the journey is much more scanty and less accurate. The Sample Survey contains no

relevant information whatever. Any discussion, therefore, must start from the number of persons who actually work in Dudley, this figure is not readily available since the local office of the Ministry of Labour and National Service covers both Dudley and Sedgley. Nevertheless, a reasonably accurate estimate may be made in the following way. At the last complete count in mid-1948, the number of workers in the combined area was 24,619. Making some allowance for the fact that part-time workers were counted as half-units by the Ministry, the total number of workers may be estimated to be in the region of 25,600. Bearing in mind the respective populations of the two areas, it would seem that the number of persons employed in Dudley is about 20,000. This should not be regarded as a firm estimate but rather as an indication of the order of magnitude. Assuming that it is reasonably accurate it follows from the information given in Table XV that these 20,000 workers would be divided approximately as between residents and non-residents as follows :—

Residents	..	16,800
Non-residents	..	3,200
		<hr/>
		20,000

Thus the daily outward movement of more than 11,000 workers would seem to be matched by an influx of about 3,000 who work in the Town but live elsewhere. It would be unwise, however, to place too much emphasis on the influx of workers. Many of the places of employment are situated near the boundary of the County Borough and it is only to be expected that their labour forces would be drawn from an area over a radius of three or four miles. In these circumstances the crossing of local government boundaries by employees on their way to work is quite irrelevant so far as the discussion of the social problems of the County Borough is concerned.

VII. WELFARE.

Although there seems to be no cause for anxiety as to the social consequences of long-term economic trends, much remains to be done to improve conditions in the existing industries, which have unfortunate effects on the pattern of social life in the Town. Many existing factories are sited in a most haphazard fashion, and many premises

are old and ill-designed to meet modern industrial needs and conditions. The installation of modern machinery in old premises usually demands a high initial outlay on the reconditioning of buildings. The arrangement of machinery will

Table XX.
Welfare and Canteen Facilities.

Type of Industry	Number of Firms providing Welfare or Canteen Facilities	Total Number of Firms
Engineering, including Iron and Steel	29	124
Electrical	2	13
Building and Public Works Contracting	—	55
Saw Mills, Woodworking, etc.	3	11
Mining, sand and clay products	5	14
Textiles and Clothing (including Rubber and Leather) ..	7	25
Road, Rail and Canal Transport	2	19
Professional and Miscellaneous Services	8	63
Distributive Trades	6	199
Other Industries	3	61
Total	65	584

necessarily be influenced by the design of the premises and the planning of machine processes may therefore be made more difficult. The large number of small, and in many cases, old premises often results in inadequate sanitary provision for the workpeople. Old staircases of awkward design, together with

bad layout of machinery, increase the risk of accidents. Natural lighting, ventilation and heating are also often difficult to provide. The psychological effect of bad working conditions, although not easily demonstrable, may have an unfavourable influence on the general well-being of the individual worker. Modern welfare services are therefore required to combat these influences.

Table XX gives a general picture of the number of firms providing welfare and canteen facilities in Dudley at the present time. The firms differ widely in size, but insufficient information exists to judge whether the size of the firm is associated with the extent of the welfare provision that is made.

From this Table it can be seen that sixty-five factories in Dudley provide canteen or welfare facilities or both for their workpeople. Although under war-time regulations only factories with over 250 personnel were required to provide canteens,* this does not mean that such services may not be needed in the smaller factories, and such welfare facilities as accommodation for clothes drying, bicycle sheds and bus shelters also require further consideration.† The small factories, like those, so common in Dudley, draw their labour from a wide area, but find it difficult to provide adequate welfare arrangements. Canteens and elaborate medical or welfare services are costly, and the small firm often finds itself unable to afford them.

Dudley has already planned to zone industry in specific areas. The rebuilding of some smaller factories in these areas would automatically result in the emergence of industrial estates. Consideration should then be given to the provision of welfare services serving a number of small factories on a co-operative basis. These might be provided by the employers jointly, assisted perhaps by the local authority. Local Trade Unions might also consider to what extent they have responsibilities in this regard. Industrial canteens are particularly suitable for development on a co-operative basis; so also are recreational facilities, rehabilitation centres, personal welfare services and medical centres. The clinic that has been provided for the factories on the Slough Trading Estate affords a good example of what might be done. This type of develop-

* Factories (Canteen) Order, 1943.

† Of the sample interviewed 30% had a journey to work of more than 20 minutes.

ment would demonstrate that it is possible to create a community of interest within a working neighbourhood. On this basis industry in Dudley could offer to the employees services of comparable standard to those of the large organisations in the Black Country, and so might help, in some measure to check the drift away from the Town.

VIII. THE TRADE UNIONS.

The fact that the unfortunate employment record of Dudley has left its mark on the development of the Trade Unions in the Town, is by no means a circumstance that is peculiar to Dudley, for Trade Union history over the last hundred years has shown that industrial depression and the unemployment that goes with it have often resulted in a certain weakening of the movement. Small factories, the persistence of the "General Workman," and a high proportion of women in certain industries are all factors which might be expected in association with a comparatively "unorganised" industrial area.

There are two types of Trade Union branch organisation in Dudley. In certain Unions, in particular the engineering Unions, the branch is based on the place of residence of the members. In others the place of work is the basis of branch membership. The largest engineering Union, the A.E.U., has a branch in Dudley with 750 members, but the greater proportion of them work outside the Town. Similarly, there is a local branch of the National Union of Mineworkers, but all the 400 members work outside Dudley. There are altogether 51 Trade Union branches in Dudley; the larger of them are, in addition to the two mentioned above, those of the Transport and General Workers Union, the National Union of Public Employers, the National Union of Distributive and Allied Workers, the National Union of Garment Workers, and the Sheet Metal Workers Union.

Because of the difference in branch organisation, it is difficult to estimate how large a percentage of Dudley's employed population is composed of Trade Union members. In discussions with Trade Union officials, however, an estimated figure of 12% was given which is very low for an area in which such a large percentage of the people are employed in the manufacturing industries.

The development of Trade Union organisations has meant in most cases, that the interests and operations of the main

Trade Unions have become focussed in Birmingham, where the Union area offices are situated. Although there is a Trades Council in Dudley itself, the part played by it in the corporate life of the Town is not very large. Nevertheless, the Trade Unions are represented through the Trades Council on the Local Employment Committee, the Youth Employment Committee, the Pensions Committee, the Local Advisory Committee of the National Assistance Board and the War Savings Committee.

Partly because of low Union membership, few social activities are organised for members. There is a local Labour Club at which many Unions hold business meetings, but it is used for little else. The Unions do not appear to have participated in the development of apprenticeship schemes in Dudley industry. Trade Union officials also feel that Dudley is a long way behind most industrial areas in the development of joint consultative machinery. It seems unfortunate that Union branch life has not developed more vigorously in Dudley, where so many people travel out of the Town to their work. In such an area strong branches organised on a place of residence basis could make a very substantial contribution to the social integration of the working community.

IX. CONCLUSIONS.

Planning theory, whether applied to satellite towns, new towns or the neighbourhood units of existing towns, has been based on the assumption that a Town as a whole should present a balanced picture of housing, industry, commerce, social activities and the usual amenities and services. Had the structure of Dudley industry remained the same as it was a century ago, this integration of home, community and work would have developed naturally. The death of the "domestic" wrought nail trade and the exhaustion of certain natural resources have meant, however, that the local Neighbourhoods are no longer self-contained from an economic point of view. The sporadic development of industry has produced in Dudley a mixture of housing and industry, but not an organic association between the two. In general, planners have suggested that although each Neighbourhood unit may not have its industrial complement a compromise might be effected whereby an industrial zone could be created that would meet the needs of several of these smaller Neighbourhoods, and it is

understood that action has been taken along these lines in Dudley. Narrow limits have, however, been set to zoning by the need for proximity to motive power, the control of smoke pollution, the accessibility of labour, and, above all, the shortage of undeveloped land.

There are three main reasons why "natural integration" is impossible in Dudley. First, there is only a small area of land that can be devoted to industrial use and much of what is available requires extensive capital outlay before it can be developed; secondly, the range of industries that might be expanded or developed is limited by the raw materials and the type of labour available; and thirdly, some of the industries of Dudley have been slowly declining over a number of years, a process which it must be presumed will continue unless radical changes occur. It appears probable that the decline of industry within the Town is associated with the increase in the numbers of its workpeople who seek employment outside its boundaries. From the economic point of view, Dudley has become so closely integrated with the industrial life of the West Midlands generally that the Town can no longer be said to be an "industrial centre." This dependence upon industry outside Dudley's boundaries poses two questions which are especially significant to the planner. The first is how far the introduction of new industries would establish the economic "balance" that is commonly agreed to be an objective of good planning, and secondly, whether new industries can be attracted to Dudley in order to diminish the Town's dependence upon its neighbours.

The first question is best left to the economist. So far as the second question is concerned, it must be asked whether there is any real evidence that a full community life for the people living in Dudley is dependent upon the availability of opportunities for work within its boundaries for the bulk of the employed population. It is true that suggestions have been made by planners that a "dualism" is created in the lives of those who work in one place and live in another. The work place tends, it is suggested, to assume in such circumstances a separate identity of its own, and the problem may reach formidable dimensions. The chief characteristic of the "dormitory" suburb is said to be its physical emptiness during the day and its social sterility after the workers return in the early evening. These are, however, mere suggestions, and no evidence has been adduced which suggests that the

economic inter-dependence of Dudley with the Black Country is a factor which is undermining the social life of the Town to any substantial degree. In fact the opportunities for employment outside the town enrich social life by increasing its variety and its range.

CHAPTER IV.

POPULATION.

(a) *Size*

At the beginning of the twentieth century the population of Dudley was about 48,700 persons. By 1939 it had exceeded 62,000. Since that date the introduction of compulsory military service has introduced an element of doubt into the calculation since the question naturally arises whether a young soldier serving in Western Germany, for instance, can be regarded as one of the "Population of Dudley" because his parents reside there. It is here that administrative policy may conflict with popular, commonsense conceptions. To the Registrar-General, preparing his official estimates, the young soldier is not one of the Dudley population. It is believed that, to his family, he is.

These considerations lead to two definitions :—*

Total Population	..	Those who normally reside in Dudley, or would reside there but for service in the armed forces.
Civilian Population	..	Total population minus the armed forces.

It is suggested that for the purpose of town planning it is the total population that should be considered.

Since there has been no census since 1931, the present population can only be estimated. Two estimates are presented here. Both relate to the middle of 1949 :—

Total population, based on the sample survey	.. .. .	63,600†
Civilian population, as officially estimated by the Registrar-General	.. ..	62,880

* A number of other variant definitions are also in use for technical purposes but the two given are sufficient for the administrator and the planner.

† The estimated distribution of the population by Age and Sex is given in Appendix III.

The sizes of the population at various dates during the present century are given in Table XXI, from which a general impression of the rate of growth can be obtained.

Table XXI.
Total Population and Annual Rate of Growth
1901 - 1949.

Year	Population	Source	Relative Growth % per year
1901	48,733	Census	0.47
1911	51,079	"	0.90
1921	55,894	"	0.64
1931	59,583	"	0.52
1939	62,100	Registrar-General	0.24
1949	63,600	Sample Survey	

These figures are not unduly disturbed by alterations of boundaries. The Dudley Corporation Act, 1928, increased the area by 817 acres and transferred a small population which at the 1921 census numbered only 204. In 1934 there was an exchange of about 20 acres with Tipton,* but no corresponding exchange of population was involved.

The steady growth of population which is suggested by the last column of the table, based as it is on rather long periods of time, conceals wide annual variations. For example, an increase of 520 between 1931 and 1932 was followed by an actual decline of 310 in the succeeding twelve months. Moreover, the industrial structure of Dudley, the large working class population, and the preponderance of the younger age groups, all lead to the expectation that this rate of growth should have been more rapid than has actually been the case. The inference is that a certain amount of outward migration has occurred, particularly since 1921.

* Ministry of Health Order No. 77,777.

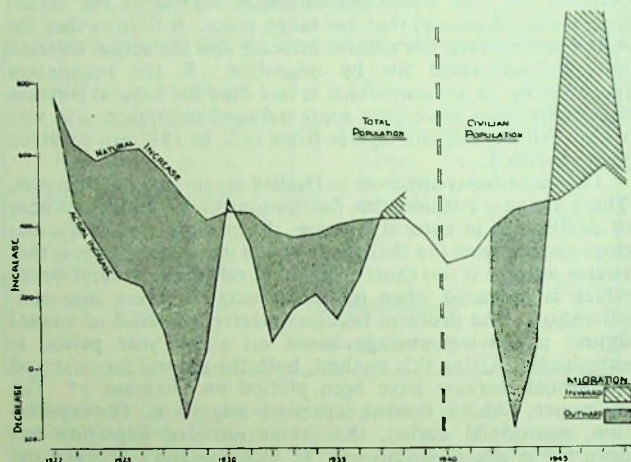
This is an exceedingly important point for the planner, and it is therefore fortunate that a rough estimate of migration can be calculated. The annual number of births and deaths is readily available, and the difference between the two figures represents the natural increase of the population. This can be compared with the estimates of the population which the Registrar-General prepares every year, for the difference between any two successive estimates represents the actual increase (or decrease) that has taken place. It follows that the difference between the natural increase and the actual increase must be accounted for by migration. If the population increases by an amount which is less than the natural increase then there must have been some outward migration, and vice versa. All the relevant figures from 1922 to 1949 are collected in Appendix I.

The movements apparent in Dudley are not easy to interpret. There are very considerable fluctuations in the annual number of deaths and in natural increase. Even more violent fluctuations characterize the changes in actual increase. It seems that twelve months is too short a period to reflect the general trend, which is obscured when too much detail is taken into consideration. The problem becomes clearer if instead of annual figures a moving average based on a two-year period is substituted. Using this method, both the natural increase and the actual increase have been plotted on Diagram 3.* The difference, which is shaded, represents migration. The expectation, mentioned earlier, that some outward migration has occurred is amply confirmed. In fact, the story between the two wars is substantially one of large natural increase coupled with a considerable movement of population away from Dudley. This outward migration seems to have occurred in two main waves. The first was already in progress by 1922 and became so severe by the late 1920's that the population actually began to decline. A short period of recovery was quickly followed by the second wave which seems to have begun with the depression of 1931 and continued until in the late 1930's the general industrial revival was supplemented by the re-armament programme. The second wave was rather less severe than the first and did not absorb the whole of the natural increase in population. Towards the end of the period a small amount of inward migration was noticeable.

The latter part of the Diagram relates to civilian population.

* The statistics on which this Diagram is based are given in Appendix I

DIAGRAM III
COUNTY BOROUGH OF DUDLEY
INCREASE OF POPULATION AND
MIGRATION



It is primarily influenced by the call-up for the armed forces during the war and the subsequent release from service. No doubt those movements were supplemented by other movements of civilian population such as, for example, evacuation and the movement and direction of industrial workers to war industries, but the figures unfortunately cannot be disentangled. The return from the forces after 1945 was so rapid that the full extent of the movement cannot be shown on the Diagram.

Although the full interpretation of these population changes must remain a matter of some speculation they would seem to be associated with two main factors (apart from the general upheaval caused by war):—

1. Changing industrial and employment conditions.

2. The tendency to move out of the crowded towns of the Midlands to the less crowded suburban areas (Abercrombie and Jackson in their *Outline Plan for the West Midlands* refer to this tendency as the "Flight to the Fringe").

It would be of merely academic interest to attempt to forecast the future trend of population in Dudley. A fairly high rate of natural increase is to be expected, but the factors affecting migration, which are likely to be of decisive importance, are as yet either unknown or undecided. Much will depend upon the Development Plan itself. It is not irrelevant to remark that the work of the demographer should go hand in hand with that of the planner so that implications of proposed developments may be considered at each step.

A number of widely differing figures have already been suggested for the year 1962. Four of them are listed below, and it is suggested that it would be premature to add to them still further :—

- | | |
|--|--------|
| 1. The Registrar-General has estimated that the civilian population (taking into account natural increase, but making no allowance for migration) will increase to | 67,910 |
| 2. <i>The West Midlands Plan</i> , making an allowance for migration, reduces this expectation to | 67,645 |
| 3. The Planning Officer of the Dudley and District Joint Planning Committee proposed in a memorandum dated October, 1947, a re-distribution which would reduce the population of Dudley to | 58,600 |
| 4. Abercrombie and Jackson in the <i>Outline Plan for the West Midlands</i> suggest a planned reduction to | 55,000 |

Some of the factors which will no doubt influence the future trend of population may be noted :—

The Development Plan itself. If the area zoned for residential purposes is insufficient to meet the requirements of a moderately large natural increase in population, then a proportion of the most mobile group, most probably that of the next generation of young married couples, may be forced to seek accommodation outside the boundaries of the County Borough. Serious social consequences would follow. The alternative would be (a) overcrowding within the town, (b) the extension of the boundaries, or (c) a deliberately planned

population, of a more representative character, in another area.

The Development of Industry. Opportunities for employment are rarely in equilibrium with the needs of the population in an area as small as a single town. If the industrial structure is developed so as to provide opportunities for the younger and more ambitious workers, and if business prospers, the natural increase in the population will be absorbed and there may even be a tendency to attract population from outside. Conversely, if the industrial structure stagnates, or even declines, then an outward flow of migration must be expected, which will be led by the abler workers. Obviously, the provisions of the Development Plan with regard to industry are of crucial importance in this regard.

Transport. Cheap and rapid transport tends to postpone migration by permitting men to seek employment at some distance from their homes. Although this factor is considered in detail in the section of this Report dealing with the Journey to Work, it may be remarked here that the constant upward trend of transport costs in the country generally during recent years shows no signs of abating, and is likely to encourage a movement of the population nearer to places of work when houses become less scarce. This has a special importance for Dudley where the tendency towards migration appears to operate very readily.

Education. A large part of the emphasis in modern education is placed on the learning of new skills so as to utilize to the full the potential abilities of young people. Once these skills are acquired there is less likelihood that youth will be satisfied with employment facilities which happen to be available locally, and there is a corresponding likelihood that opportunities will be sought that are closer to the interests and skills of the young worker. A well diversified industrial structure would widen the scope and variety of occupations available in the town and lessen the tendency for ambitious young people to seek employment elsewhere.

The Development Plans of other Authorities. The urge to migrate is not usually strong and is inhibited in most people by a natural resistance to change; nevertheless, where migration does occur, it appears to take place most readily over short distances. It is therefore particularly important to note that if the semi-rural authorities near to Dudley should be zoned for extensive residential development, then the "Flight to the Fringe" is likely to continue.

(b) Age and Sex Structure

The next subject which requires consideration after the size of the population of Dudley is its age and sex structure. This has not been accurately determined since the census of 1931. As a reasonably accurate estimate was essential the work was undertaken as part of a sample survey carried out in the summer of 1949 (the methods and results of this survey are set out in Appendix III). Some months after the survey had been completed an estimate was published by the Registrar-General based on a count of the National Registration records, but this related to the end of 1947. There is substantial agreement between the two sets of estimates, but two differences may be noted, which are relevant to the present discussions; the survey shows firstly a rather smaller proportion of elderly people (65 years and over) than the official estimate, and secondly, a somewhat greater proportion of females in the age-group 25-34. Whether the latter estimate reflects a natural tendency of women to under-estimate their age is a matter for speculation; in both cases the difference could be the result of sampling error, although the probability is not high. The comparison is complicated by the difference in dates to which the estimates relate and by the fact that the survey provides an estimate of the total population, while the Registrar-General's figures refer only to civilians.

There are much more important differences when the survey estimates for Dudley are compared with the official estimates for England and Wales. This comparison is much more reliable, for both relate to the same date (mid 1949) and both refer to total population. The two distributions are illustrated on Diagram 4. As the discussion will be concerned more with the relative sizes of age-groups, the usual "population pyramid" has not been presented, and each "bar" in the Diagram includes both sexes. Two factors emerge from the comparison, which are sufficiently important to merit special consideration. They may be clearly seen by reference to the Diagram.

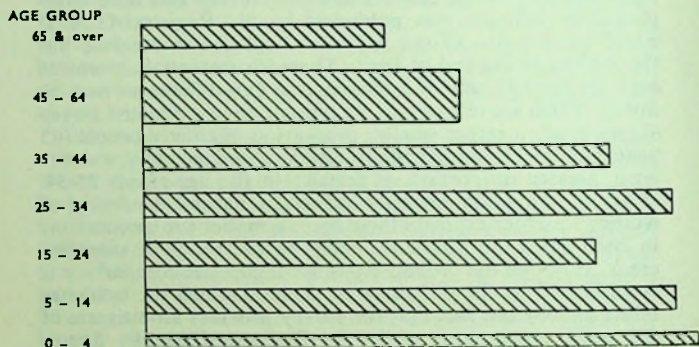
1. In England and Wales the bar representing the 0-4 age-group is much longer than that which represents the 5-14 group. In Dudley the difference is scarcely noticeable.
2. In England and Wales the groups 45-64 and 65 and over are both considerably greater than in Dudley.

Attention may first be directed to the earlier age-group. It is widely recognized that the large increase in births which has

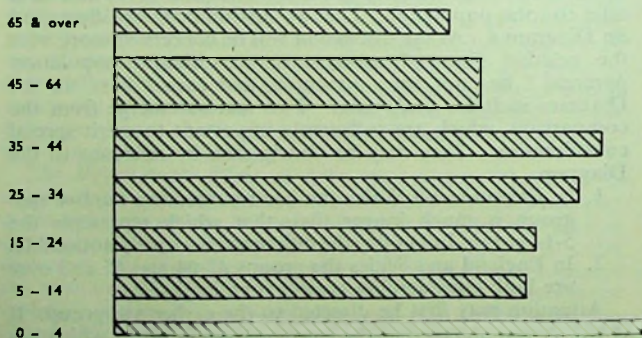
DIAGRAM IV

ESTIMATED AGE DISTRIBUTION OF
POPULATION MID - 1949

COUNTY BOROUGH OF DUDLEY



ENGLAND AND WALES



occurred throughout the country since 1945 will create some extremely difficult problems for local education authorities. A large part of the increase is undoubtedly temporary, and in fact the number of births is already showing signs of a decline. The result will be a "bulge" in the population, at present below school age, which will pass first through the primary schools and later through the secondary schools. In five years time the long bar representing the 0-4 age-group (in the Diagram for England and Wales) will have moved up to replace partially the 5-14 group. The resulting increase in the primary school population will be rapid and considerable. Moreover, the indications are that the 0-4 group itself have been replaced by one somewhat smaller so that the increase in school population will not be sustained. This situation creates difficult problems of educational planning both with regard to building and staff. A glance at the Diagram representing the Dudley age-distribution shows there is little evidence that such a "bulge" is likely to pass through the Dudley schools.

It is possible to go a little further. The 15-24 years group (in the Dudley Diagram) is smaller than the next higher age-group. During the next 10 years this 15-24 group will gradually move up to replace the larger one above. In the process it will provide the new generation of parents to whom will be born a large proportion of the children of the next decade. As it is a smaller group somewhat fewer births must be expected, unless there is a fundamental change in the habits of the people. Some children will, of course, be born to parents in the older age-group, but the proportion will rapidly decline. The absent "bulge" has not, therefore, been postponed.

To sum up these inferences from the estimated age distribution, it appears that the "bulge" in population which will shortly begin to pass through the schools of the country will scarcely affect Dudley. There will be some increase but it will be small compared with England and Wales as a whole. The "bulge" will not appear later, and planning for education may proceed on the assumption that the school population will be more stable in Dudley than elsewhere during the next ten years or so.

These are bold inferences to draw from the Diagram alone. As the question is important it would be wise to look for confirmatory evidence. If there is a "bulge" in the population of the country but not in Dudley it would follow that the recent large increase in the annual number of births in England

and Wales has not been paralleled in the County Borough. In order to make the comparison presented in Table XXII annual births have been expressed in index form with the average of the triennium 1930-32 as base and equated to 100.

Table XXII.

Index of Annual Births
England and Wales : County Borough of Dudley
(1930-32 = 100).

Year	England and Wales	Dudley
1935	95	90
1936	96	93
1937	97	97
1938	98	94
1939	97	92
1940	93	90
1941	92	86
1942	103	95
1943	108	97
1944	119	101
1945	108	92
1946	130	102
1947	140	110
1948	123	93
1949	116	94

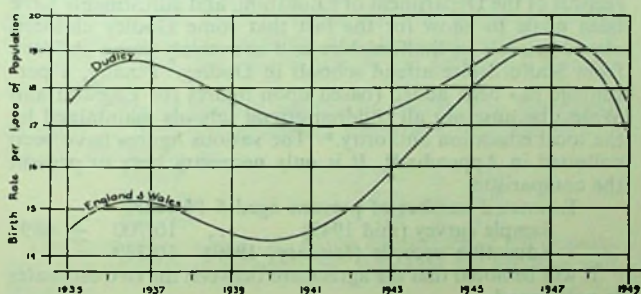
The evidence of Table XXII substantially confirms the expectation. The index for England and Wales rises to 130 in 1946 and 140 in 1947: for Dudley it never exceeds 110. Between 1935 and 1947 the increase for England and Wales is 45 points, for Dudley it is a mere 20 points. During the last three years the Index for England and Wales has fallen by 24 points; in Dudley the fall is only 16 points. These statements confirm the view that the "bulge" never reached the intensity in Dudley that it did elsewhere, and that although there will undoubtedly be some increase in the annual number of children reaching school age during the next few years, the total school population will be more stable than in the country as a whole.

It is interesting to proceed a step further and relate annual births to population, *i.e.*, to compare birth rates. The estimated civilian population of Dudley during the war years is, however, an unduly low figure from which to compute the rate. A crude correction has therefore been introduced for the years 1940-1945 based on the assumption that the ratio of Total Population to Civilian Population is the same for Dudley as for England and Wales. As was noticed before, the annual figures present a rather confusing picture, and in order to clear away some of the detail and present the broad lines of development a trend* has been computed to fit the data for the last fifteen years. The trends for both England and Wales and Dudley are shown in one graph for ease of comparison (Diagram 5). A logarithmic scale has been used since it is

DIAGRAM V

ENGLAND AND WALES AND COUNTY BOROUGH OF DUDLEY

TREND OF BIRTH RATES 1935 - 1949



the relative change that is important. Two facts emerge quite clearly :—

1. The birth rate in Dudley has in general been higher than in England and Wales.

* The trend is represented as the regression of Birth Rate (Y) on time (X) by fitting a polynomial of the fourth degree in X.

2. The recent steep rise in the rate for England and Wales has carried the national birth rate well above its former level, while a very moderate rise in Dudley has achieved little more than a recovery to the level of the early 1930s.

It is the second of these facts that is responsible for the "bulge" in the population of England and Wales, but so far as Dudley is concerned, the effect is obviously much reduced; this provides additional confirmation of the earlier statements. The other fact suggests that without a very considerable change in the family building habits of the people there was not as much scope for a rise in the Dudley birth rate as there was in the rest of the country.

Further confirmatory evidence may be obtained from an entirely independent source. The survey estimates of the number of persons in the age-group 5-14 years may be compared with the number of children in the same age-group as estimated from the registers of the Dudley schools. It will have been observed that the question under discussion is based primarily on the relatively large size of the present 5-14 age-group, and confirmation of its size will provide a substantial confirmation of the inference drawn from it.

The relevant figures have been extracted from the central records of the Department of Education, and adjustments have been made to allow for the fact that some Dudley children attend schools in Staffordshire and conversely some children from Staffordshire attend schools in Dudley. Finally, a percentage has been added (based upon figures for England and Wales) because not all children attend schools maintained by the local education authority.* The various figures have been collected in Appendix II. It is only necessary here to present the comparison.

Estimated number of persons aged 5-14 years

Sample survey (mid 1949) 10,700 \pm 689

Education records (January, 1949) 10,389

It will be noted that the agreement between the two estimates is quite good.

Thus the inference concerning the future trend of the school population has received some confirmation from three sources :—

The annual number of births;

The trend of the birth rate;

* The Department of Education, Dudley, is not responsible for any of these estimates.

An independent check on the survey estimates of the size of the present school age group.

Finally, it may be noted that the future school entrants at the age of 5 years, up to the year 1954, had already been born by 1949. From the records of births it is possible to estimate their number by making an appropriate allowance for deaths* before attaining the age of 5.

The estimated number of children who will attain the age of 5 years in each of the years from 1950 to 1954 is therefore as follows :—

1950	..	..	1,040
1951	..	..	1,160
1952	..	..	1,240
1953	..	..	1,060
1954	..	..	1,070

These figures will be subject to some variation on account of migration, and will, of course, be reduced by those children who do not attend schools maintained by the local education authority.

(c) *The Aged*

Attention may now be turned to the other end of the span of life. Local authorities have recently been charged with additional duties concerning the care and welfare of old people. One of the factors bearing upon the magnitude of the task is obviously their number, and, in so far as they form a dependent group, the relative size of the group will also be important.

The number of persons residing in Dudley who were aged 65 years or over was estimated, from data obtained by the sample survey, to be :—

Males	..	..	2,190	±	235
Females	..	..	2,820	±	306
Persons	..	..	5,010	±	434

The proportion which this group constitutes of the population as a whole may be compared with that for England and Wales :—

Persons aged 65 and over as % of Total Population		
Dudley	..	7.9% ± 0.7%†
England and Wales	..	10.8%

* Assuming mortality of 41 per 1,000 in the first year of life, and 2 per 1,000 for each of the succeeding 4 years.

† The Registrar-General has estimated the proportion of persons aged 65 and over in Dudley to be 8.6% at the end of 1947, but this estimate is based on civilian population only.

It was this remarkable difference to which attention was drawn when considering the diagrammatic representation of the age distribution. The principal reason for this is that for many years the birth rate in Dudley has been higher than the national rate, so that the younger age groups have been augmented to a greater extent than in the country generally. The natural consequence is a reduction in the magnitude of the problem of the care of old people compared with its size in other areas.

It is well recognized, however, that the number of old people will increase in the next few years. By 1962, the survivors of the present group aged 65 and over will be 78 and over while the new group will be the survivors of those now* aged 52 and over. An estimate has been prepared by interpolation of the size of this latter group, and, using the mortality experience of England and Wales for the triennium 1945-1947, it has been projected to 1962 so as to estimate the likely number of survivors.

There is, of course, ample scope for error in a calculation of this kind. The starting figures are only estimates, future mortality is unknown, and migration has not been considered. Nevertheless, the figures should give a broad indication of the likely change in the number of persons over 65 by 1962. The computations give :—

<i>Age Group</i>	<i>Estimated No. of Persons</i>		
65 - 72	3,940
73 and over	3,270
<u>65 and over</u>	<u>7,210</u>

Hence, there is some evidence that the size of this group will increase by rather more than 2,000 during the next thirteen years.

The date 1962, was chosen because other important estimates are also available for the same year. They are :—

The Registrar-General's projection of the natural increase in the Dudley Population.

Projections for Great Britain prepared by the Royal Commission on Population.

With this additional information it is possible to compare the estimated proportions of old people in Dudley and in Great Britain at this later date. The comparison shows :—

* Mid 1949.

Persons aged 65 and over as % of Total Population.

Dudley	..	..	..	10.7%
Great Britain:				
Royal Commission Estimate	" A "	..	12.5%	
"	" B "	..	12.6%	
"	" C "	..	12.8%	

It follows that, so far as can be ascertained from the information at present available, the proportion of old people in Dudley will still be below that in the country as a whole in 1962, and may be expected to be approximately equal to that in England and Wales at the present time.

Finally, it may be remarked that any recurrence of outward migration is likely to affect more of the younger age groups than the old, and would, therefore, tend to increase the proportion of old people remaining in Dudley. This would naturally increase the problems associated with their care and welfare.

CHAPTER V.

HOUSING.

(i) *Households without houses.*

The Minister of Health has stated that one of the aims of the housing policy of H.M. Government is the provision of a home for every family. In making a brief survey of the housing accommodation of the present residents of Dudley this may well form a convenient starting point, and focus attention on the extent to which the existing houses are adequate or inadequate in number, irrespective of their size or quality.

It is perhaps easiest to think of a "house" for this purpose as a dwelling place with its own address. It possesses its own front door, though this door may not necessarily open on to the street or a front garden. Thus structurally separate flats are "houses" within this definition, but a number of rooms in an undivided dwelling house do not constitute a "house," regardless of the fact that both owner and occupier may collectively refer to them as a "flat." The "house" portion of a combined house and shop, and the living quarters of licensed premises are also regarded as "houses" within this definition.

An immediate difficulty lies in translating into practice the concept of "family." If every family ought to have its own home, then families must be recognizable as such, so that their number may be counted and compared with the number of houses available for them. It is obvious that a family cannot be defined for this purpose in the biological sense of parents and their children, if only for the reason that the middle generation of three would belong to two families, being the children of one and the parents of the other. The attempt to define a family as a married couple and their children also fails, for children grow up and at some stage in the process they cease to be members of their parents' family—at least for housing purposes. They begin a new family for themselves on marriage. There is still the difficult question of deciding whether children are to be regarded as members of their parents' family when, having attained maturity, they leave home to seek work elsewhere.

Even if the attempt to define a family on such grounds were to succeed, there is still the problem of classifying single persons who may choose to live with or near relations as members of their families.

The only practical solution seems to be to let the people decide for themselves, and investigate what groups of people actually live together as families. To avoid confusion in terminology it is better to speak of "households" instead of families when making this approach. A household then is a number of people living together as one unit. The criterion of living together is really one of boarding together, having a common larder, and eating meals at the same table. In this sense, the lodger who lives as one of the family is a member of the household, but a person who rents a room and boards himself constitutes a separate household. The "household" concept also makes it easier to classify the case where a group of two or three working girls living away from home might share a house. It would be difficult to consider them as forming a family, but if they board together, there is no difficulty in regarding them as a household.

The initial enquiry is, therefore, turned to discovering the extent to which there are households without houses of their own in Dudley. Table XXIII shows the number of houses in the Sample Survey which contained one, two or three households. It would be simple, but erroneous, to apply the overall proportions from the sample to the town as a whole so as to estimate the number of households in excess of the number of houses. The complicating factor is the particular method of sampling which was adopted. The method, and the reasons for it, are fully explained in Appendix III. The result is that the sample places much greater weight on the larger households than on the smaller, giving a distorted picture of the population as a whole. This has been corrected by assigning weights to each measurement according to the number of "Adults"* in the household (these weights are shown in the second column of Table XXIII). The number of additional households can then be estimated on a precisely similar basis to that described in the Appendix for the estimate of the number of persons in a particular age group. The computation gives an estimate of 1,440 households in Dudley who at the date of the Survey did not have their own house. The standard error of this estimate is 242 households, and gives an indication

* For definition of "Adult" employed for this purpose see Appendix III

of the amount of sampling error which might be present.

The inference is obvious—if provision is to be made for “one household—one house,” then the Development Plan will need to provide for an additional 1,400 to 1,500 houses to take account of this factor alone.

Table XXIII.

Distribution of Dwellinghouses by Number of Households.

No. of Adults in Household	Weight	No. of Households in Dwelling			Total
		1	2	3	
1	1.0000	11	—	—	11
2	0.5000	214	23	4	241
3	0.3333	154	5	1	160
4	0.2500	122	1	1	124
5	0.2000	54	3	—	57
6	0.1667	24	1	—	25
7	0.1429	15	—	—	15
8	0.1250	2	—	—	2
9	—	—	—	—	—
10	0.1000	2	—	—	2
11	0.0909	1	—	—	1
Total	—	599	33	6	638

It will be realized that the definition of a household which has been employed for this estimate is very arbitrary; it may, in fact, conceal a very undesirable state of affairs. In the housing shortage it is not at all uncommon for young and recently married couples to live with the parents of one of them simply because they are unable to find other accommoda-

tion. If, in the circumstances, the young couple do not board themselves as a separate unit, then their plight is overlooked in the count of "households." Both they and the parents with whom they live would together count as only one household.

To take account of this factor it is necessary to introduce a new concept, which may be called "concealed household." This consists of a potential household forming part of a larger complex unit that may split up into two or more separate households when sufficient houses become available. It has been shown that, during the building boom between the two wars, a great many new households were in fact created by the splitting-up of complex units.* There is no good reason to suppose that it will not happen again, and indeed, if every married couple should have their own home then a considerable number of these concealed households must be transformed into actual households.

Without attempting a formal definition of a "concealed household," the basis of the estimate can perhaps be made clear by describing the analysis that was actually made of the sample data. The various households in the sample were grouped into three categories according to the following scheme :—

Category I.

- (a) Married couple, with or without children.
- (b) Married couple, with or without children, together with a dependent relative.
- (c) Remnants of a family (e.g., two sisters, or brother and sister).
- (d) Any of the above, plus a lodger.
- (e) Single-person household.

Category II.

- (a) Two married couples with or without children.
- (b) Two married couples, with or without children, together with dependent relatives.
- (c) One married couple, plus a relative who is independent.
- (d) Any of the above, plus a lodger.

* Block, Alexander, *Estimating Housing Needs*, The Architectural Press 1946).

Category III.

As for Category II, but substituting " Three " for " Two " married couples.

Those of the first category do not appear likely to separate readily into more than one household; the second category is regarded as containing one concealed household, and the third category two concealed households. Table XXIV shows

Table XXIV.

Distribution of Concealed Households.

No. of Adults in Household	Weight	No. of Concealed Households			Total
		0	1	2	
1	1.0000	11	—	—	11
2	0.5000	240	1	—	241
3	0.3333	108	52	—	160
4	0.2500	66	58	—	124
5	0.2000	31	22	4	57
6	0.1667	11	10	4	25
7	0.1429	6	5	4	15
8	0.1250	1	1	—	2
9	—	—	—	—	—
10	0.1000	—	2	—	2
11	0.0909	—	1	—	1
Total	—	474	152	12	638

the distribution which was found in the sample survey for each category. In order to estimate the total number of concealed households in Dudley from this data the same method of weighting must be used as in the previous estimates. The

computation, together with the standard error of sampling, gives an estimate of $3,240 \pm 228$ concealed households in the County Borough at mid-1949.

It should be emphasised that these are independent of, and in addition to, the 1,440 existing households previously considered who lack a house of their own.

All concealed households do not necessarily create an effective demand for new housing. As little work appears to have been done upon this subject, it is only possible to mention one or two factors which must be taken into account by those responsible for planning in assessing the extent to which provision need be made for new housing. The relevant factors may be either social or economic. A complex household may or may not be closely integrated. Before the first world war a household of three generations was fairly common. The eldest generation had an acknowledged place in the household and a contribution to make to the family welfare. Similar families exist to-day, but less frequently. There is a greater emphasis on the provision of special dwellings for old people. The integration of the generations is less close, and in consequence, the tendency to split up is stronger. Yet by no means all complex units of this nature will split up when houses are less scarce. There will always be some married couples who prefer to live with a surviving parent. There will always be surviving parents who prefer to live with married sons or daughters. There is a need to study the social situation in a wide variety of such complex households before expressing any definite opinion about the proportion which is likely to separate into two households.

Among the various economic factors it must be remembered that demand is a function of price. Subsidies paid by the Central Government to local housing authorities will cause rentals to be somewhat lower than they otherwise would be, and should therefore encourage the process of splitting-up. Any additional subsidy granted by the local authority will augment this tendency, while changes in government policy regarding subsidies are likely to affect the rate at which this splitting-up proceeds. It must also be remembered that differentiation is not necessarily a one-way process. In a period of full employment and economic prosperity, the tendency to split up may be strong, but if it is followed by a period of depression and unemployment the process may well be reversed and small units may join together again out of

sheer economic necessity. Moreover, it is to be remembered that, even though rents may be subsidised, the process of splitting up is likely to increase the expenditure on rent by the families concerned. If there is no corresponding increase in income, then some other items of expenditure would have to be reduced. There is some evidence that expenditure on "luxury" items is closely related to patterns of social activity, and that these patterns do not readily change. It therefore seems quite likely that when faced with the alternatives of more adequate accommodation with a curtailment of social spending, and remaining in overcrowded conditions, the choice of some families will be in favour of the latter. The whole problem is highly complicated, and would well repay further study.

The approximate number of applicants for council houses on the waiting list maintained by the Housing Department is at present 4,000, 1,000 of whom are existing householders and 3,000 non-householders. The figures may be compared as follows :—

Householders	..	1,000	Existing households without houses	..	1,440
Non-householders		3,000	Concealed households	..	3,240
Total					<u>4,680</u>
			Total		<u>4,000</u>

This comparison not only provides a striking confirmation of the survey estimates based upon households and household structure; it also suggests that a large proportion of "potential" or "concealed" households are actively prevented from setting up as independent households by the physical shortage of houses.

(ii) *Overcrowding.*

In this section attention is turned from the lack of dwellinghouses for existing and potential households to a consideration of the unsuitability of the size of the house for the household which it accommodates. The problem is partly one of the mal-distribution of houses among households of different sizes, and partly one of the impossibility of fitting a large family into a house of standard size.

The first point for investigation must be the extent to which overcrowding on a statutory scale exists within the County Borough. Table I of the Housing Act, 1936, provides that

Where a house consists of :—	The permitted number of occupants is :—
1 room	2
2 rooms	2
3 „	5
4 „	7½
5 „	10

with an addition of 2 persons for each room in excess of 5.

In applying this test children under one year are not counted, and children between the ages of one and ten years count only as half persons. When counting in this arbitrary manner, it is perhaps better to speak of "Statutory Occupants" so that their number is readily distinguished from the actual number of persons who live in the house. Rooms of less than 50 square feet are ignored.*

The Act provides for a further test which operates by reducing the permitted number of occupants where some of the rooms have a floor area of less than 110 square feet. The measurement of floor area is hardly feasible in a sample survey designed to obtain information of a social nature, and in any event lies more within the province of the appropriate health and housing authorities than of a Department of Social Science. It was, however, realised that many houses contain rooms smaller than 110 square feet, and to make a rough allowance for the consequent diminution in the permitted number of occupants a revised Table was prepared reducing the number of occupants as follows :—

1 room	2 persons
2 rooms	2½ „
3 „	4 „
4 „	6 „
5 „	8 „
6 „	10 „
7 „	11 „
8 „	13 „

For every house in the sample survey the number of persons appropriate to its size according to the above Table was computed and compared with the number of "Statutory Occupants" (as previously defined). Houses overcrowded on

* Throughout this discussion the "Number of Rooms" in a house is taken to exclude attics, halls, lobbies, landings, bathrooms, W.C.s sculleries and any other rooms used for offices or other business purposes.

this scale are probably also overcrowded on the statutory scale, except for a few in which all the rooms are large, and there the point could only be decided after accurate measurement of the rooms.

The analysis showed no less than 46 out of the 638 houses visited were overcrowded, or 7.2% of the sample. A further examination of the 46 which were overcrowded revealed the following as the principal causes:—

1. Dwellings occupied by two or more households	5
2. Dwellings with complex households likely to split up when new houses become available	9
3. Households with not more than 4 children occupying small houses	17
4. Large households (more than 4 children)	15
	<hr/> 46

The first two causes have already been dealt with, and the overcrowding under these heads will automatically be eliminated if and when the provision of new housing realises the aim of "Every family its own house." It is not necessary to consider them further in this context.

The third cause seems to indicate a certain amount of mal-distribution by which families with up to four children are found occupying two or three-roomed cottages, while the smaller family has a somewhat larger house. The last cause points to a definite shortage of houses larger than the present standard for the accommodation of the large family. One or two examples will perhaps illustrate these points:—

Normal families in small house.

Case 5 Husband, wife and 3 children in two-roomed house.

Case 17 Husband, wife and 4 children in three-roomed house.

Case 40 Mother and 3 children in two-roomed house.

Large families.

Case 3 Husband, wife and 10 children in four-roomed house.

Case 10 Husband, wife and 5 children in three-roomed house.

Case 12 Husband, wife and 7 children in four-roomed house.

Case 15 Husband, wife, 6 children and a lodger in three-roomed house.

The seventeen cases of normal families in very small houses are distributed as to house ownership as follows:—

Private landlord ..	10
Local authority ..	5
Owner-occupier ..	2

Several of the houses which are owned by private landlords are nineteenth century two- and three-roomed terraced houses or cottages, and will no doubt be dealt with by replacement in the development plan. Those which are local authority owned are modern post 1918 houses, and the question of their occupation by households of unsuitable size offers a challenge to the local authority in its policy of estate management.

Only two of the large families are tenants of houses owned by private landlords, the remaining thirteen occupying local authority houses. There is nothing in this situation that is peculiar to Dudley, except perhaps that there is a somewhat higher proportion of large families than in some other towns. The private landlord tries, so far as he is able, to find "suitable tenants" for his houses, and would be unwilling to have them occupied by families which are far too large. This puts the burden of providing accommodation for the large family upon the local authority, and although efforts have been made to deal with the problem by building some houses with extra bedrooms, it is only too obvious from the cases quoted that this extra provision does not go far enough.

The number of large families found in the sample was only small (15), and in these circumstances the sampling error is likely to be considerable, so that it would be unwise to make a firm estimate of their number. Nevertheless, the evidence suggests that about 2% of all families are large enough to need houses with four or more bedrooms in order to avoid overcrowding, even on the bare minimum scale permitted by statute. The burden of making this provision must fall upon the local authority. The question of whether a large family can afford to pay the full economic rent of a house sufficiently large for its needs, or whether by mere reason of its size such a family becomes entitled to financial assistance towards its rent from the rest of the community, is one to which the Council must give careful thought.

It is not suggested that the statutory scale for measuring overcrowding is one that provides accommodation which

would be regarded as appropriate to a highly civilised country. No distinction is made between living rooms and bedrooms so that, for example, provided the permitted number of occupants is not exceeded, it is immaterial that the exigencies of space demand that the kitchen-living-room be turned into a bedroom every night. There is not even adequate provision for the separation of the sexes for sleeping, for the Courts have ruled that so long as a house has two rooms it is possible to separate the sexes within the meaning of the Act.

While it is scarcely possible in the present economic circumstances to make all provision that may be desirable, it is felt that some discussion of the extent to which the existing houses of Dudley fall short of what may be regarded as a "civilised" scale of housing will not be without value. The construction of such a scale must pay most attention to bedroom accommodation. Even a large family can manage with a single living room and a kitchen if there is adequate sleeping accommodation. As to what constitutes adequate sleeping accommodation may be a matter of opinion, but the following scale has been applied as representing a desideratum for the future:—

Married couple	one room
Children over the age of ten years ..	one room each
Children over one year and under ten ..	two sharing one room if of the same sex
Children under one year	not counted

Each household in the sample was assessed on the above scale for its requirements in terms of bedrooms. The scale requirements were next compared with the accommodation which was actually available to them, and the extent of the excess of deficiency tabulated. The resulting tabulations were then weighted in the manner previously described in order to reflect a truer picture of Dudley as a whole.* The relative distribution is shown in Table XXV.

To examine Table XXV is to realise something of the magnitude of the problem which confronts any authority seeking to plan for the adequate accommodation of the citizens within

* Throughout this computation those houses which were occupied by two or more households were excluded, for the available information related only to that part of the house occupied by the household of which the informant was a member. Moreover, it is assumed that the problem of "double-households" will eventually be solved by the provision of an adequate number of houses.

its area. The Table is readily divided into three almost equal sections:—

One-third of the households enjoy one (and in a few cases more than one) bedroom in excess of their needs.

One-third of the households have sufficient accommodation to meet their needs.

One-third of the households would require additional rooms.

Table XXV.

**Distribution of Houses according to
adequacy of Bedroom Accommodation.**

Excess or deficiency of rooms available over rooms required	Per cent. of all houses
1 or more in excess	35.6
Equality	33.4
1 short	18.5
2 "	7.3
3 "	3.6
4 or more short	1.7
	100

It may add somewhat greater emphasis to these statements to point out that one-third of the households in Dudley (as distinct from the number of dwellinghouses) is in the region of 6,000.

So far only sleeping accommodation has been considered. It is, however, an easy matter to add one or two living rooms to the assessed number of bedrooms in order to arrive at an estimate of the total number of rooms that would be needed. This may then be compared with the size of existing houses in Dudley. The question whether to add one living room (which would presumably be a kitchen-living-room), or two (which would permit of a living room quite separate from the kitchen)

is not easy to decide, and would probably depend to some extent on the size of the household. A further complication lies in the fact that rooms of less than fifty square feet of floor area were not counted at all in the sample survey. Hence a small kitchenette, for example, would be ignored. In order to avoid making an arbitrary decision and to present the fullest information, estimates have been prepared on two scales:—

Scale "A" Number of bedrooms as assessed plus ONE living room.

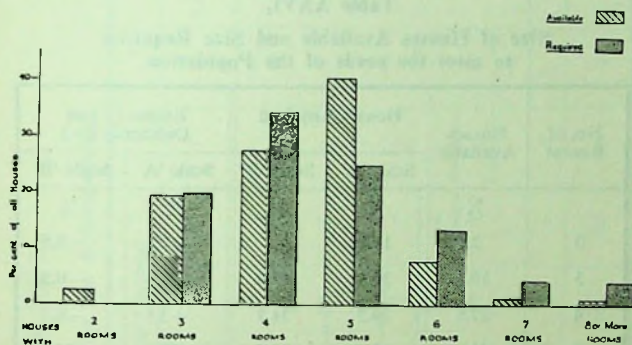
Scale "B" Number of bedrooms as assessed plus TWO living rooms.

It will be noted that no separate consideration has been given to the provision of a "front room" or "parlour." While such a room would be excluded on Scale "A," the question of its provision on Scale "B" would be primarily one of the design of the house. Table XXVI presents the comparison between the distribution of houses which are available and the distribution which would be needed to meet the requirements of the population on each of these scales. On either scale it is immediately obvious that there is a considerable excess of 5-roomed houses. The popular conception that the 5-roomed house meets the needs of the "average" family is quite erroneous. Concentration on the construction of this type of house has resulted in an excess of rooms for the small family, and is the cause of much overcrowding of larger families. If houses are to be built to meet the requirements of the households which actually exist to-day (particularly on Scale "B") then there is an immediate need to build more 4-roomed, and 6-, 7-, and 8-roomed houses and a good many fewer 5-roomed houses than has been the custom hitherto. So long as households vary in size, and in consequence have varying requirements, then it is impossible to meet these requirements by the provision of a house of standard size.

The comparison of the size-distribution of houses that exist to-day and those that would be required on Scale "B" is presented graphically in the accompanying diagram. The excess of 5-roomed houses and the shortage of other sizes is clearly demonstrated.

Any attempt to meet the needs of individual households by building houses of suitable sizes is fraught with immediate and continuing difficulties. This is so primarily, because of the human tendency to remain in one house and to resist change, while, of course, the size of the household changes with the

DIAGRAM VI
COUNTY BOROUGH OF DUDLEY
DISTRIBUTION OF HOUSES AVAILABLE
AND HOUSES REQUIRED
(SCALE " B ")



passing of time, and tends to perpetuate the problem of mal-distribution. This is indeed a problem to which the Council must give the most careful thought. The present policy of H.M. Government with regard to the construction of new houses makes it extremely likely that the ownership of most of the new estates will be in the hands of the local authority, and to this extent the problem is one with which the Council can deal by well-directed policies of estate management.

The problem of mal-distribution is a difficult one. Even if housing could be provided according to the size distribution required by Table XXVI it would not necessarily follow that every household could obtain a house of the size suited to its needs. To provide housing according to the exact distribution of Table XXVI would merely ensure that for every household which enjoyed an excess of accommodation there would be one that was overcrowded. Table XXVII illustrates the present position. The scale employed for this purpose is merely a conventional one of one person per room. The figures enclosed

within heavy lines running diagonally across the table show the number of households whose accommodation provides equality between the number of persons and the number of rooms. All households above and to the right of these heavy lines are "undertenanted" and all below and to the left are "overcrowded" on this scale. The further removed from this diagonal the greater is the extent of over- or under-

Table XXVI.
Size of Houses Available and Size Required
to meet the needs of the Population.

No. of Rooms	Houses Available	Houses Required		Excess (+) or Deficiency (-)	
		Scale 'A'	Scale 'B'	Scale 'A'	Scale 'B'
	%	%	%	%	%
2	2.6	19.9	—	-17.3	+2.6
3	19.4	34.3	19.9	-14.9	-0.5
4	27.6	24.5	34.3	+3.1	-6.7
5	40.4	13.1	24.5	+27.3	+15.9
6	7.9	4.3	13.1	+3.6	-5.2
7	1.1	2.3	4.3	-1.2	-3.2
8	0.4	0.7	2.3	-0.3	-1.9
9 & over	0.5	1.0	1.7	-0.5	-1.2
	100	100	100	—	—

crowding. From the table the following figures can be easily extracted:—

Households undertenanted (above diagonal)	46.6%
Households with one person per room ..	23.0
Households overcrowded (below diagonal) ..	30.1

100

Table XXVII.

Size of Households and Accommodation.

Number in Household	No. of Rooms Occupied									Total
	1	2	3	4	5	6	7	8	9 & over	
1	1	—	3	3	1	2	—	—	—	10
2	—	11	20	33	31	6	3	—	1	105
3	1	7	31	37	52	15	—	—	1	144
4	—	10	24	41	68	7	1	—	—	151
5	—	3	16	28	57	7	2	1	—	114
6	—	—	5	15	20	4	—	2	1	47
7	—	—	3	7	19	4	—	—	—	33
8	—	—	—	4	8	—	—	—	—	12
9 & over	—	—	1	3	5	5	4	2	2	22
Total	2	31	103	171	261	50	10	5	5	638

Thus it appears that on this conventional scale more than three-quarters of the population are either over- or under-housed, while a brief calculation from the marginal totals reveals that if the existing accommodation could by some means be re-distributed according to the size of the household, no more than one-quarter need be so.

It may not be without value to close this section with a brief consideration of some of the forces tending to produce a mal-distribution of households among the existing houses.

The evidence presented by the Royal Commission on Population amply demonstrated that the father of a large family is at considerable financial disadvantage compared with his neighbour with a small family. The cost of providing food, clothing, etc., for a family of four, five or more young children must inevitably reduce the amount that can be afforded for rent. Hence, when the children in a large family are below the statutory school-leaving age (*i.e.*, when they are wholly dependent upon their parents) there will be a strong tendency for the family to live in a house smaller than their needs demand. It is all they can afford.

Throughout the country there is a tendency for the average size of the family of the manual worker to be larger than the family of the non-manual worker. Further, within the large class of manual workers, the family of the unskilled tends to be larger than that of the skilled worker. Thus there is, broadly speaking, an inverse relationship between income and size of family: the smaller the income the larger the family. Hence the tendency noted in the previous paragraph is considerably augmented.

Since the early 1930s there has been a noticeable tendency for young people to marry earlier. This decline in the average age at marriage reduces the probability that a large family will consist partly of dependent children and partly of adult sons and daughters earning a full wage. Thus it is more likely that with the passage of time the size of the family will gradually be reduced by marriage until it is small enough to suit the house it occupies, and that the household income will slowly increase until a larger house can be afforded.

As the children grow up, marry and leave home, the financial position of the parents improves, so long as the father remains at work. Suppose then that the local authority has made available to a large family a house suitable to its needs, and has fixed the rent at something below the full economic value.

It would follow that as the family becomes smaller on the marriage of adult sons and daughters, so the ability of the household to pay the rent improves. Thus there is unlikely to be any strong natural force inducing the family to move to a smaller house as its needs decline. The resistance to change that increases with age is likely to operate in the reverse direction.

Those members of the community whose financial position enables them to purchase their own home are more than likely to have small families. Experience indicates, however, that they are unlikely to choose the smaller type of house. Thus at both ends of the scale the tendency to mal-distribution is strong.

It is evident that within the community there are forces tending to aggravate rather than diminish the problem of mal-distribution. They cannot be neglected. Some provision must be made for a greater number of the larger type of house than is justified by the actual distribution of households of various sizes as they exist to-day. This provision should be supplemented by active policies of the Council designed to induce more "freedom of movement" in the tenancies of large houses so that the natural forces are counteracted as far as possible. For example, if a partial solution is sought by way of differential rents for houses occupied by large families, then the differential element might decrease more rapidly than the size of the household, placing a strong economic incentive on the declining household to move to a smaller house. In any event it seems that the extent to which provision need be made for an excess of larger houses will depend in no small degree upon the success of the policies of estate management that are pursued by the Council.

SUMMARY AND CONCLUSIONS.

In addition to summarizing the discussion of the previous pages it will be useful to transform the various proportions into terms of the actual numbers of houses that are needed at the present time. As this involves the making of estimates on estimates it should be understood that the margin for error is thereby increased.

1. Existing Provision of Houses.

It is essential, of course, to have an estimate of the number of houses at present in Dudley. The following figures are

taken from the Rating records by courtesy of the Borough Treasurer:—

	1st April, 1949	1st April, 1950
Houses and Flats ..	16,208	16,285
Houses and Shops	483	487
Licensed Premises ..	206	207
Total	<u>16,897</u>	<u>16,979</u>

Taking the 1950 figures and making an allowance for about ninety houses which are empty and are not available for re-letting since they are scheduled for demolition, an estimate of 16,900 houses has been adopted.

Applying the proportion of Col. 2 of Table XXVII, the best estimate of the size distribution of these houses is as follows:—

2 rooms	440
3 "	3,280
4 "	4,670
5 "	6,820
6 "	1,340
7 "	190
8 "	70
9 or more rooms ..	90
	<u>16,900</u>

2. *Relief of Statutory Overcrowding.*

Overcrowding is largely due to four factors:—

- (i) Houses occupied by two or more households.
- (ii) Houses occupied by complex households.
- (iii) Normal families in very small houses.
- (iv) Large families.

Factors (i) and (ii) are due to the absolute shortage of houses. Factor (iii) is a problem of mal-distribution and factor (iv) is partly due to mal-distribution and partly to the relative shortage of the larger size of house.

The number of houses required to relieve overcrowding will depend in large measure upon the extent to which re-distribution of houses among households can be achieved. If a policy of building to relieve overcrowding is adopted, and if a start is made with the larger type of house, then for every large family re-housed, one case of overcrowding is relieved. The old house thus vacated is then available to relieve a second

case of overcrowding in a somewhat smaller family. In other words, the provision of new houses can be made the occasion of securing at least an equal amount of re-distribution of existing houses. If the re-distribution goes no further, then the number of new houses required is one-half of the number at present overcrowded.

Estimates made from the sample survey, and based upon the above assumptions, suggest the following approximate numbers of new houses of various sizes would be needed to relieve overcrowding:—

Houses with 4 rooms	300
” ” 5 ”	150
” ” 6 ”	70
” ” 7 ”	30
	<hr/> 540

Table XXVIII.
Houses Available and Houses Required
for Existing Households on Scale “B.”

No. of Rooms	Estd. No. of Houses available	Estd. No. of Houses required	Difference	
			Excess	Deficiency
2	440	—	440	—
3	3,280	3,640	—	360
4	4,670	6,300	—	1,630
5	6,820	4,490	2,330	—
6	1,340	2,410	—	1,070
7	190	780	—	590
8	70	410	—	340
9 & over	90	310	—	220
	16,900	18,340	2,770	4,210

3. *The provision of a house for each existing household.*

The number of households that do not at present occupy a separate house is estimated to be $1,440 \pm 242$. To this extent there is an absolute shortage of houses. The houses needed if all existing households are to be accommodated on the scale described as "Scale B" is compared with the present number of houses in Table XXVIII above.

The provision of houses to meet these requirements would automatically provide for the relief of all statutory overcrowding. It would make no provision whatever for "potential" or concealed households.

4. *Concealed Households.*

In addition to the provision under paragraph 4 a further large number of houses would be required to meet the needs of potential or concealed households. The maximum extra provision is estimated to be $3,240 \pm 228$ houses if every concealed household were to have the opportunity of setting up an independent home. The waiting-list for council houses suggests that a very large proportion of these potential households are prevented from becoming actual households by the shortage of accommodation.

5. *Mal-distribution* exists on an extensive scale. Forces operating in the community tend to aggravate rather than to diminish the problem. The Council may seek to counteract these forces by carefully designed policies of estate management. The letting of new houses may be made the occasion of some re-distribution.

CHAPTER VI.

CONCLUSION.

The main burden of the present report is that, in a built-up area such as Dudley, wholesale replanning of the physical type is not practical politics. The economic cost alone prohibits it, for the land and its resources have been developed for many generations and the physical assets that have been created cannot be lightly thrown away. What the Town already possesses must be exploited to the greatest degree possible and it is therefore the primary task of the council so to direct the business of day-to-day administration that a continuous process of betterment will be set in motion. The full utilization of the natural resources and the social capital of a town is an objective, however, which can only be secured to a relatively small extent through formal planning, involving the preparation of designs and programmes for physical development and re-development. It is true that this type of planning must necessarily possess a considerable importance for the future of Dudley; much can, for instance, be achieved through the reconstruction of the Town Centre, and the utilization of areas of land which are now derelict. Nevertheless, infinitely more will be achieved by continuing the step-by-step process of gradual adaptation which has been so notably successful in Dudley during the past thirty years, than by wholesale rebuilding. If this process is to be continued in the future with equal, or perhaps even greater success, three requirements must be satisfied; first, the Council must decide upon objectives that can be both clearly understood by everybody concerned, and attained within a reasonable limit of time, say five to ten years; second, interest in and support of the attainment of these objectives must be aroused amongst the people of Dudley generally; and thirdly, each of the existing services of the Council, Education and Health as well as Housing and Highways, must be expected to make its contribution to the execution of this plan.

So far as the economic basis of the social life of Dudley is concerned, it has unfortunately proved impossible to make recommendations to deal with the steep rise and fall in the

unemployment rate which has obtained in the past. This has been due in large measure to the fact that a high proportion of the Town's workpeople are employed in the metal industries of the West Midlands, of which the Town's own industries form an integral part. Dudley alone cannot achieve the "economic balance" which has been desired by so many people, and even in the West Midlands as a whole, the possibility of supplementing employment in the metal industries with employment in other industries such as textiles must be regarded as very remote. Dudley's economic future must therefore be assumed to be inseparably connected with the general prosperity of the metal industries.

Much can, however, be achieved by improving the amenities available for workers in Dudley's industries, which compare unfavourably in this respect with those in the larger firms in the Black Country. Attention should be directed to improving the quality of industrial buildings, and in particular to ventilation, lighting, safety precautions and general appearance. The introduction of new industries into Dudley on the other hand is rendered exceedingly difficult by limitations of available space and in the labour force which can be employed. Although many firms occupy scattered and sometimes congested sites, the density of industrial employment per acre is low, and many possibilities exist both to re-arrange industries more satisfactorily on existing sites, and to make some of the less suitable sites available for other uses, such as playgrounds.

The small size of Dudley's firms renders the provision of welfare facilities more difficult than it is elsewhere, but rearrangements of the kind suggested above might overcome this to a certain extent at least; in addition, much might be achieved if the smaller firms joined together to provide facilities such as canteen and medical services on a co-operative basis.

It has been shown in the section of this Report dealing with the age-structure of the population that Dudley will not be faced in the future with the problem of caring for the aged to the same extent as will prevail in the country as a whole. As, however, the manpower available in the 18-40 age group will be considerably reduced in the next ten years, consideration will have to be given to adapting Dudley's industries so as to make it possible to utilise the services of older people to take the places of younger workers whose numbers will gradually decline.

In order to make it possible to overcome the obstacles which will undoubtedly be encountered in the objectives outlined above, the administrative apparatus responsible for carrying the Council's policies into effect must be designed so as to secure co-ordinated and effective action without, at the same time, losing its flexibility and sensitivity to local needs in general, and individual needs in particular. It is this latter characteristic which is the peculiar merit of the British system of local government. But it is now threatened. The Town Council of Dudley will be called on, in the second half of the twentieth century, to discover ways and means of preserving it. During the past hundred years, local government in Great Britain has been developed as a means of carrying out certain tasks of essential importance to the community, such as the provision of water supplies, the prevention and removal of insanitary conditions, the construction and repair of streets and highways, the relief of the poor, education, and the provision of hospital treatment. A great deal of useful pioneering work has been done in this way, and a high standard of efficiency has been reached in many of these services. Conditions have now changed, however, and many new factors have intervened, notably advances in technology and in administrative organisation. These have combined to displace local government authorities as administrative agencies in many fields, notably those of the social assistance services, the operation of public utility undertakings, rating and valuation, hospital administration and the maintenance of the arterial road system. The scope of local government administration is shrinking, and it is hard to say when the process will stop.

This process should not be regarded as a cause for alarm, provided that the foundations of the system of local government itself are not threatened. This will happen as soon as it is evident that the Council's representative functions (as distinct from its administrative duties) are weakened and that it has ceased to be able to accept a general responsibility for the welfare of the town as a whole, and to guard its interests against the world at large. There is, it must be admitted, a very real danger that this may happen, because the importance of the administrative duties of local authorities has greatly overshadowed that of their representative functions during the past hundred years, and the reduction in the scope of the former may well lead to a corresponding reduction in the

importance of local government as a whole. If this happens, the Town Council may ultimately become a mere agency for the execution of somewhat minor and miscellaneous tasks for which the Central Government may not wish to assume a direct responsibility.

It can be concluded that there is one way only whereby this unfortunate state of affairs can be arrested, namely, by strengthening what may be termed the "community-building" functions of local authorities. The emphasis for the future should be, not so much on the provision of services for people, as on the development of a community life in which each individual and family can participate to the full. This would require the reversal of the process which has gradually gained momentum during the last 150 years of withdrawing administration from the experience of the ordinary citizen. The active participation of the citizen in the administrative life of his parish, which continued throughout the seventeenth and eighteenth centuries, has been almost completely destroyed by the modern system of local government, and the time has come when it should be asked whether it cannot be restored in some measure, the parish being replaced by the Neighbourhood as the basic unit.

The whole future of local government itself may come to depend on developing much closer links between the citizen on the one hand and the local Council which watches over his interests on the other. Careful consideration should therefore be given to the methods whereby this objective can be attained. It can be looked at from two points of view; firstly, from that of the constitution of local government authorities, in relation to which methods of election of councillors, the procedure at Council and Committee meetings and local government boundaries are most relevant; and, secondly, from that of the methods adopted in the administration of local government services, which must be examined to discover ways in which closer ties can be created between administration departments and the communities they serve.

The line of attack which is most profitable to the planner is to approach the problem from this second angle, and re-examine the framework of administration with this new end, of Neighbourhood or "community building" in view, rather than the narrower one of the technical or administrative efficiencies of the housing, health or other services.

So far as the social services in Dudley are concerned, there

can be no doubt that the point has now been reached in their development at which they can be exploited much more fully in the wider interests of community planning, in addition to serving their more immediate purposes, such as the education of the young, the improvement of infant health and so forth. The new health services have, for instance, caught the imagination of the people; the citizen is becoming more and more a willing visitor at Health Clinics of one kind or another, and a ready listener to the advice that is given to him as to the moulding of his habits in the interests of his health. The possibilities of utilising this tendency in the interests of the creation of active community life have been demonstrated by the pioneer work of the Peckham Health Centre, and the achievements of this Centre can in large measure be exploited by any public health authority which is prepared to widen the somewhat narrow objectives which have hitherto been associated with the public health services. It is likely that this broadening of their activities will take place in any event in the near future, because the concepts of "physical" and "mental" health are steadily tending to merge with each other. Bodily illness, it is now recognised, is frequently caused by the unsatisfactory social conditions of the life of the patient, and the range of the preventive health services is accordingly showing a tendency to expand rapidly. On the other hand, the importance of the efficient working of the maternity and child welfare clinics for the mental health of the population cannot it is now recognised, be exaggerated, since ways in which a child is cared for during its infancy have been clearly demonstrated to exert a decisive influence over the development of its personality. Not only should the educational function of these clinics, directed towards the physical and mental health of the family as a whole, be emphasised, but they might also be used to promote wider cultural interests, as for instance, by arranging for the display of books and pictures in them. Every adult has a keen interest in and a deep concern about the problems of child care; every parent wishes to know how a healthy family life can be built up around the child, and in particular, how the everyday difficulties that crop up in the home can be dealt with successfully. If these needs are met fully and effectively, nearly every social problem of our times will be touched upon, from delinquency, matrimonial disputes, and the care of the aged to the provision and maintenance of household equipment, personal hygiene

and food values. A strong case can therefore be made out for adapting and re-equipping the clinics to make it possible for them to play the important part they should in the vitalizing of the Neighbourhoods they serve.

The second social service which offers exceptionally favourable opportunities for exploitation in the interest of Neighbourhood development is Education. Even in the narrow sense of the education of children at school, it is now generally understood that the objective to be borne in mind is the development of the characters of the pupils, and their preparation for life as a whole, rather than the old-fashioned concept of the teaching of "subjects." This objective cannot be attained merely through instruction during school hours; to achieve it in full measure requires intimate collaboration between school and home, and in many areas efforts have been made to secure this through the medium of Parent-Teacher Associations. A measure of experience has already been gained in Dudley of the problems which are involved in work along these lines, but much more might be achieved if formal recognition were given to these Associations as part of the apparatus of educational administration. In its wider sense, Education includes the services which are rendered through Evening Institutes, the new County Colleges, Youth Clubs, and other types of formal and informal education, designed to serve the needs of adults and young people during their leisure time. It also interlocks with the services of the Libraries, and of the Museum and Art Galleries. Thus conceived, the education service has a vitally important part to play in the development of the Neighbourhoods. Whether or not specially designed Community Centres are built, the services of the existing schools should be adapted wherever possible to serve social needs, and new services should be developed to fill the gaps which are discovered from time to time, such as for instance has been done by the appointment on the staff of the Director of Education of a full-time Youth Organiser. The Education Service has indeed at least as much to get from active participation in a programme of Neighbourhood development, as in carrying out its more everyday tasks such as the provision of school meals, or the school medical service. Not only can a better standard of attendance be expected from pupils who are better clothed and fed, and more receptive of instruction, but the teacher can learn to see the world more clearly from the pupil's point of view. The

students at the Dudley Training College have much to gain, for instance, from taking part in the social activities of Neighbourhood Associations and from observing the work of the Clinics and other services.

The Youth Service is closely associated with Education and possesses even greater potentialities as a means of promoting Neighbourhood development. It is at present administered in Dudley by a Youth Committee, composed of representatives of the Local Education Authority together with co-opted members who are experienced in the work of the schools and voluntary bodies. While there are no Youth Clubs which are fully organised and maintained by the Local Authority, grant aid is given to various clubs according to their several needs; this may cover the rent and repair of premises, purchase of equipment, attendance of leaders at training courses, and swimming facilities made available by the Baths Committee. It should be noted, however, that at the time this survey was made, fifty-four of the clubs were entirely self-supporting.

Good as the Youth Service is, the fact that the Council is alive to the need for further development is shown by the plans that have been made for the provision of accommodation for youth clubs attached to the community centres in the new estates now being developed, and for the employment of two full-time Youth Organisers. This programme will, however, take some time to reach maturity; increased expenditure will be required, and delays will be inevitable before sites can be acquired and buildings erected. Meanwhile, it should be borne in mind that the vitality of any community depends on the people who go to form it, and not on the buildings that house it. Other towns faced with similar accommodation difficulties have proved that schools, though not ideal, can be used for youth club work, as a wide range of activities can be accommodated in the classrooms and a hall is also usually available which can be used for corporate efforts.

The development of the existing clubs in Dudley is restricted by the lack of adequate premises, and the shortage of leaders and of instructors for specific activities. The problem of leadership is a difficult one, which is more readily solved where the club is associated with some larger group such as a church, chapel, sports club or community centre. The assistance of the Youth Organiser should prove most valuable in this respect. At present, the main interest of the members of the Youth Clubs is in recreational rather

than cultural activities, and this will inevitably remain the case until additional leaders and instructors are available. Whether, when a demand for activities of a wider nature does come into being, it should be met by the club itself or by the education authority, is a matter which obviously calls for the closest collaboration between the two; the club associated with a church which meets in a school hall by courtesy of the authorities, and studies drama or music under a local authority teacher, is an ideal example of the happy relationship which can be developed between a public body and a private group. It remains to be seen what part will be played by the new County Colleges; in general, it is safe to say that no rivalry between youth service and education service need, or should be allowed, to exist.

Reference was made in an earlier chapter to the peculiar difficulty of Dudley's situation in regard to open spaces. Every effort should be made to see that the fullest advantage is taken of existing open spaces, including school playgrounds and private sports fields, the use of which by youth clubs can often be arranged. The waste lands which intersect the County Borough should be regarded by the voluntary associations as a challenge to their ingenuity, and any effort to utilise them by sports clubs or as "junk playgrounds" should be sympathetically considered. An informal meeting place between young people, has already come spontaneously into existence at the Civic Restaurant, where quite large groups gather together for lengthy discussion over cups of tea. This offers unparalleled opportunities for the development of a special Central Club, which would add to the existing facilities such amenities as a reading room, craft shops, etc. The vital element of informality should, however, be carefully preserved.

The Housing Department has, of course, an exceedingly important part to play in Neighbourhood development. The opportunities and the responsibilities of the Council as a landlord are equally great. In the section of the present Report dealing with Housing, the need for a carefully thought out and efficiently administered management policy has been stressed. Not only is there the problem of selecting the tenants from amongst a long list of applicants, but even after the process of selection is over, the tenant has to be given a house which is appropriate to the needs of his family and is, as far as possible, situated in a part of an estate in which he will find congenial neighbours. It is obviously desirable that the best use should

be made of the accommodation that is available, and the small families should not be allowed to occupy rooms they do not use to the best advantage. Care and skill are, however, required to ensure that the social life of neighbourhoods is not disrupted by the removal of "key" families, and that individuals are not needlessly uprooted from the surroundings which may almost have become part of their personalities. The need to take these social factors in management into consideration was, indeed, emphasised in the Report of the House Management and Housing Associations Sub-Committee of the Ministry of Health in 1938,* and there is therefore no need to enlarge still further on the subject in the present Report.

The construction of a new housing estate on modified "Reilly Green" lines was begun in the summer of 1950; this Estate is situated outside the boundaries of the Town, and the Council will therefore have no control over the various social services, such as Education and Public Health, which will be administered in it. This is most unfortunate, as the realization of the ideals embodied in the proposals put forward by Sir Charles Reilly and Mr. Derek Bridgwater are largely dependent on the efficient administration and co-ordination of these services, and the scheme will inevitably fail in its ultimate purpose if close collaboration with the responsible authority cannot be achieved in this regard. Special problems will arise in selecting appropriate tenants to live in each of the Greens, and in assisting them to form good relations with their new neighbours. The development of the new Estate will, of course, afford many opportunities for valuable social research, which may have important influences on the future of housing estates design throughout the country. The fact that the administrative responsibility for the welfare of its inhabitants will be divided between several authorities must therefore be a matter of much regret, and it is to be hoped that every possible means of overcoming this problem will be explored.

It is noteworthy that the Report on the Management of Municipal Housing Estates, prepared for the Minister of Health in 1938, contained an urgent plea for the development community services on the larger estates. Neighbourhood Associations are of great importance as a means of developing a healthy social life on them; given the right guidance, such

* See Report, pp. 18-20, 23-30, 35-7.

Associations can be of the greatest assistance to the local authority, but, if they are allowed to go the wrong way, they can become an important factor in the growth of demoralization. It is therefore impossible for a Housing Authority to be otherwise than keenly interested in the problems of social organisation. It is also hard to over-emphasise the importance of the functions of the Housing Department as a social service agency, and the need for its officers to be carefully selected and trained. It will be their duty, not only to create a healthy public opinion amongst tenants in regard to the use of the amenities made available to them by the Corporation, but also to take advantage of the many opportunities that are well-nigh thrust upon rent collectors, to act as the guides, philosophers and friends of the tenants.

Consideration should also be given to the possibility of developing the work of the newly-created Children's Department in the direction of prevention as well as cure. This Department has wisely associated itself with a local voluntary association which co-operates with it in arousing the interest and enlisting the support of individuals and other agencies, without which an official service must necessarily be helpless. All trained and experienced workers with children have a great deal to contribute to the general welfare of the community which they serve, and every possible opportunity should be taken to provide talks and courses of lectures, especially to young parents, young adults, and adolescent boys and girls, dealing with the normal processes of "growing up," and, when appropriate, some of the more common problems which arise in the "broken home" and the "problem family." So far as possible each Neighbourhood, and group of neighbours, should be taught to take care of its own problems of child neglect and delinquency without constantly seeking the help of officials and of the courts. The same argument applies to the Probation Service. The only effective remedy against juvenile delinquency is an enlightened public opinion and a cheerful acceptance of responsibilities by parents. Mere repression is as likely to create small societies in which petty thieving and wanton destruction are regarded as "normal" behaviour, as it is to produce a somewhat sullen acceptance of the more rudimentary standards of law and order.

Up to the present time this work has been handicapped by the lack of residential Homes within the County Borough for

the care and treatment of children who for one reason or another are unsuitable to be sent to foster-parents, or for children needing temporary accommodation. The Children's Officer, in her report for 1949-50 emphasises this need, and in addition the advisability of providing a hostel for the adolescents. As the report says, "Adolescence is a notoriously difficult period in life, and such hostels would be invaluable, not only in providing accommodation for children in-care, but also for other adolescents who may be almost equally in need of similar care."

Consideration must also be given to the needs of the aged. At the time this Survey was made, the number of old people in Dudley requiring assistance in one form or another from the local authority was small, and arrangements had been made with the County Borough of Wolverhampton for any old people requiring institutional care. The Council are mindful however, of the future needs of their own Town, and have under consideration the provision of two small homes for those requiring hostel accommodation. This will no doubt be an increasing necessity in view of the growing numbers of old people in the balance of the population, a phenomenon which is not peculiar to Dudley but is a general trend of the population as a whole. The time may soon come, therefore, when it will no longer be possible for the Wolverhampton Authority to assist Dudley in this matter.

From the point of view of social welfare, the ideal solution is to provide accommodation for old people as far as possible in surroundings with which they are familiar. Much of the fear of removal to "the House" has been banished, but there is still a fear in the minds of many old people that as their powers fail and money dwindles, they will be forced into alien surroundings. The Planning Authority should therefore consider what the needs for the area are likely to be both now, and in the future. Able-bodied old people are happier living with or near their relatives and friends. The Survey showed that there was a tendency for a majority of people born in Dudley to remain in the Town, and if this trend continues it is safe to assume that provision of old people's flats or bungalows on new estates will fulfil a substantial part of their need, and enable them to live near their married children. It is probably more satisfactory for these flats or bungalows to be distributed throughout each Neighbourhood rather than to build them in separate blocks, gathering a number of old people together

under one roof. One of the difficulties that has been experienced where old people are housed in groups, is that they have been forced to look after each other when sick or in need of domestic help because there have been no younger people nearby to assist. Provision is also needed for their leisure activities. Dudley has an Old People's Welfare Committee which is growing in importance, and Netherton has a flourishing Darby and Joan Club. The excellent work being done by these voluntary organisations must not be forgotten when planning for the needs of old age, and accommodation for club activities might be provided where possible within the hostels thus giving the inmates a vital contact with the world outside.

A first step in carrying all these recommendations into effect might well be the organizing of part-time training courses in social administration in which special attention would be paid to the psychology of individual development and social relationships; these courses should be designed to suit the needs of members of the Town Council and committees, voluntary workers in welfare agencies, health visitors, teachers, rent collectors, members of the police force concerned with juveniles, and officers engaged in public health and educational administration. Such courses have already been provided in a number of towns by the National Association for Mental Health, which might be asked to collaborate in Dudley; the Extra-Mural Department of the University of Birmingham would also in all probability be willing to assist. The purpose of these courses would be to give all who participate in local government administration both a new outlook and new methods in their work. Advances in local government are not possible unless the existing services can be carried on day by day in the light of knowledge of their ultimate social objectives.

It is unlikely that the suggestions which have been made as to the adaptation of the existing social services to serve wider purposes, can be fully effective unless they are accompanied by a carefully planned programme of social development within each of the individual Neighbourhoods. On the one hand, a social service such as Education is largely ineffective unless it is administered in the closest contact with a living society, which has its own needs and standards. On the other hand, if a Neighbourhood is to have genuine existence, it must be conceived of, not as an area of administrative service, but as a living community, participation in whose life gives meaning

and purpose to the life of the individual citizen. Two problems then arise; how can the element of vitality be injected into the Neighbourhoods in which it may in some degree be lacking; and how can effective relationships be established between the Town Council and the Neighbourhoods it serves, which must be regarded as the ultimate source of its strength ? These are very serious problems, which have hardly yet been recognised in Great Britain, let alone dealt with effectively by any local government authority. They can only be answered in terms of the steps that can be taken in the immediate future, having regard to our existing knowledge and resources, and not in terms of radical solutions, the nature of which, it must be confessed, can be but dimly perceived at the present time. It cannot be too strongly emphasised that the initiative and the responsibility must lie with the Neighbourhood itself, which has to be stimulated to make the best use of its potentialities, and to take its place with other Neighbourhoods in a common civic life in friendly association and rivalry. If any district is dealt with as a "problem," from the top downward as it were, little will be achieved, if approached, however, as one of several communities each of which possesses characteristic virtues and shortcomings, many difficulties which might otherwise prove insuperable may never arise at all.

The first task is to pave the way for the development of Neighbourhood Associations, which would have as their main purpose the stimulation of the participation of the ordinary citizen in the daily business of social administration. As has already been pointed out, problems such as juvenile delinquency, the protection from misuse of parks, trees and other public amenities, or the adoption of high standards of child care, depend for their solution on the development of an informed public opinion, and a willing acceptance of responsibilities in these matters by the ordinary citizen. The work of the health visitor, the teacher and the probation officer is made immensely more profitable if each is confident of the encouragement and support of the public in its various capacities of parent, employer, or householder. The development of Neighbourhood Associations might start with the extension of the common practice of good neighbourliness, of which there is so much evidence already in Dudley, to the overcoming of such everyday problems as the visiting of lonely old people, and the chronic sick, assistance to the households of women who are ill, and the familiar service of "sitting in"

with young children. The vitally important objective is to develop the idea of social service as what may be termed a "common incident of citizenship," which assumes that all will give and receive according to their several abilities and needs, rather than to restrict it to activities exclusively directed by the officials of a public agency who provide things and services *for* the citizen.

It is to be expected, of course, that the members of the Town Council will play a leading part in the work of these Associations, though it is obviously impossible to make precise forecasts as to the ways in which their work might develop. Many opportunities would undoubtedly arise for the discussion of the problem of local government administration and for the co-ordination and development of the social services at the point of their impact on the recipient. There is much ground for hope, indeed, that a secure link might be built in this way between the Council and its Committees on the one hand, and the inhabitants of the several Neighbourhoods on the other. If this were so, the Council would be enabled to perform its representative function with much greater authority, backed as it would be by the intimate local knowledge of the Neighbourhood Associations and by their support on important questions of social policy. The importance of the Associations would, of course, be greatly increased if it were found possible for the Council to refer matters of local interest to them for investigation and report.

It may well be that in order to foster the work of such Associations, the Council may decide to construct a Community Centre or Centres in one or more Neighbourhoods in the immediate future, and, perhaps, to adapt the Netherton Arts Centre for this purpose. In any event, it would be an obvious disaster if sites for Centres were not reserved in the Planning Scheme in each of the Neighbourhoods. The recommendation of the Ministry of Education Report on Community Centres will doubtless be borne in mind, that the objective should be both to provide facilities in the Centres for exisiting societies and organisations, which may be correlated to each other, and to bring Community Associations into being to run the Centres. The eventual conclusion in this Report is, indeed, that "Neighbourhood does not itself necessarily constitute a social bond; but if, by grouping its leisure activities round a recreational and educational centre, a Neighbourhood can develop into a socially conscious

community learning, through managing its own affairs, to participate intelligently in the work of local and national government, then education for democracy will have made a real advance.*

The provision of Community Centres requires most careful consideration. The problems which are encountered in developing them are very much more difficult than is commonly supposed, and it is unwise to assume that the mere provision of building and other facilities will awaken an automatic response. It is much better that a Centre should grow out of Neighbourhood activities that have developed steadily over a long period of time, to meet needs that are of practical importance to the ordinary citizen, than that these activities should be expected to start from scratch, as it were, immediately a Centre is opened. There is a much stronger case in present conditions for the appointment of two or three Adult Education Organisers, who would be responsible for developing the educational work of the Health Clinics, and stimulating the work of Parent-Teacher Associations, than there is for putting up more buildings in advance of clearly recognised demands for them. The conclusion is stated in the Report quoted above that "in an established community which already possesses some corporate consciousness, the first need is for premises; in a new community coming together for the first time (as on a new housing estate) and with no corporate consciousness, there is also need for an individual whose work it should be to arouse that consciousness and stimulate the idea of communal activities in a community centre," and it is recommended that a full time paid worker should be attached to each Centre which serves more than 2,000 families.

The constitutions and functions of Community Centres and Neighbourhood Associations have been discussed at length in an authoritative publication of the National Council of Social Service, to which reference should be made.† It will be noted that the emphatic opinion is stated in this publication that "although it is desirable that as many voluntary workers as possible shall share in the running of the Community Centres or Association, it would be quite impossible for all the work to be done without the services of a full-time paid officer who usually acts both as Warden of the Centre and Secretary of the Association." It is equally important from the point of

* *Report*, pp. 4, 14.

† *Our Neighbourhood*, National Council of Social Service, 1950.

view of the local authority that a responsible and well-trained officer should be associated with the work of each of the Neighbourhood Associations, as otherwise the problem of co-ordinating the work of these Associations will be insoluble. In any event, it must always be borne in mind that the difficulties which a programme of Neighbourhood Development is likely to encounter will undoubtedly be very great indeed, and it is unlikely that they will be effectively overcome unless the appropriate professional skill and experience are available to meet them.

The Council is adequately armed with legal powers under the Education Act, 1944, to provide Community Centres as part of the Further Education Scheme. It may also make use of its powers under the Housing Act, 1936, to build new Centres on Housing Estates, and charge the cost to Housing Revenue Account, thus attracting a proportionate subsidy. Finally, an Association may apply for assistance to the Town Council, and directly to the Minister of Education, for grant aid under the Physical Training and Recreational Act, 1937. For any scheme of Neighbourhood development, the advice and assistance of national bodies such as the National Council of Social Service, the National Federation of Community Associations and the National Association for Mental Health is always readily secured. There can be little doubt, also, that the continuing interest of the University of Birmingham in the social and economic problems of Dudley can be turned to practical account as and when circumstances require.

It must not be forgotten that Dudley possesses the precious heritage of tradition, which can be exploited to serve as the basis of the social life of both the Neighbourhoods and of the Town as a whole. This advantage gives the Council every reason to approach with confidence the problems of Neighbourhood development. In some cases, notably Priory Hill, the need is urgent. In all of them, the prospect of what can be done opens up opportunities for the application of local responsibility and self-help which are particularly attractive at a time when the horizons of local government seem to be constantly narrowing. If a scheme of Neighbourhood planning is adopted by the people of Dudley, their efforts will be of far more than merely local interest, for the way will have been opened up for similar developments elsewhere.

Lessons will have to be learned not only in physical planning, and in the co-ordination of the Health, Education, Housing

and other services, but also in the association of the ordinary citizen with the process of planning, which is the chief obstacle in the way of effective planning at the present time. It is only if planning can be understood and applied as a process of day-to-day administration, closely concerned with what is now, and what can and should be tomorrow, that sufficient energy can be generated amongst ordinary people to enable plans to proceed towards the ultimate objective they embody.

COUNTY BOROUGH OF DUDLEY

APPENDIX I.

POPULATION, 1922 - 1949.

Year	Estimated Popula- tion	Births	Deaths	Natural In- crease	Actual In- crease	Migration	
						Out- ward	In- ward
Total	Population						
1922	57,860	1,468	759	709	760	—	51
1923	58,150	1,329	722	607	290	317	—
1924	58,600	1,311	730	581	450	131	—
1925	58,810	1,354	793	561	210	351	—
1926	58,930	1,342	619	723	120	603	—
1927	59,370	1,256	789	467	440	27	—
1928	58,820	1,229	651	578	—550	1,128	—
1929	*58,870	1,165	887	278	50	228	—
1930	59,530	1,219	688	531	660	—	129
1931	60,050	1,191	778	413	520	—	107
1932	59,740	1,158	770	388	—310	698	—
1933	60,140	1,056	709	347	400	—	53
1934	*60,300	1,019	651	368	160	208	—
1935	60,400	1,075	667	408	100	308	—
1936	60,590	1,111	692	419	190	229	—
1937	61,140	1,156	746	410	550	—	140
1938	61,600	1,123	691	432	460	—	28
1939	62,100		695	398	500	—	102
Civilian							
1940				251			
1941				267	1,360	—	1,093
1942				460	—230	690	—
1943				388	—370	758	—
1944				519	270	249	—
					80	322	—
					2,630	—	2,099
					270	338	—
					830	—	313
					300	91	—

*Boundary changes but with little or no effect on population

COUNTY BOROUGH OF DUDLEY

APPENDIX II.

ESTIMATE OF NUMBER OF CHILDREN OF SCHOOL

AGE (JANUARY, 1949).

	Age Group		
	5 - 9	10 - 14	5 - 14
Pupils on the registers of schools maintained by L.E.A.	4,911	5,311	10,222
<i>ADD</i> estimated number of pupils from Dudley attending schools in County of Stafford	67	73	140
<i>DEDUCT</i> estimated number of pupils from County of Stafford attending schools in Dudley ..	—211	—228	—439
<i>DEDUCT</i> places in Dudley Grammar School, Girls' High School, and Technical College occupied by pupils from other areas	<i>NIL</i>	—482	—482
	4,767	4,674	9,441
<i>ADD</i> allowance for children not attending schools maintained by L.E.A. based on proportion in England and Wales:			
8.9% of 5-9 group	424		424
1.2% of 10-14 group		524	524
Estimated number of persons in Dudley	5,191	5,198	10,389
Estimate from Sample Survey ..	5,581	5,119	10,700

APPENDIX III.

THE SAMPLE SURVEY AND THE ESTIMATION OF THE AGE AND SEX STRUCTURE OF THE POPULATION

The assembly of factual data which has relevance to the problems of town planning must always be accompanied by frequent recourse to official statistics published both by the central and local authorities. Among those who have attempted to thread their way through the tangled undergrowth of facts and figures thus available, there will be few who have not realised something of the gaps and deficiencies that exist. Indeed, it is at times a most frustrating task. Time after time the official tables contain data which, at first sight, appears to be what is required but which upon examination turns out to be something rather different. Not infrequently the data required just does not exist. Where official sources fail, recourse may be had to the methods of the sample survey to obtain important information rather than to making a series of assumptions which may or may not be justified.

It was in these circumstances that the Department of Social Science undertook a sample survey of the residents of Dudley during the summer of 1949. The survey illustrates a point at which practical needs may collide with the dictates of pure theory and force a compromise in the design of the sample which complicates the problem of estimating population values. Accordingly a description of the sampling method which was finally adopted and the methods of computation which were enforced by the sample design may be of some interest. The particular portion of the survey which is described here is the estimation of the age and sex distribution of the population, but it should be noted that the survey was also directed to the collection of information which has been used in the section of this report dealing with industrial employment, neighbourhoods and housing.

SAMPLING PROCEDURE.

As the survey was designed to obtain data which would be of assistance in Town Planning, the variety of information required was not confined to a single standard "unit." For the purpose of estimating the age-sex distribution of the population the unit was, of course, the individual. On the other hand, when considering the occupational distribution the unit, while

still the individual, was restricted to workers and potential workers—say individuals who have attained the statutory school-leaving age. Again, it was necessary to discover the distribution and range of size of household and its accommodation, for which the obvious unit was the household.

The type of sampling which best suits one purpose is not necessarily the best for another. For example, if households are sampled a decision must be made whether to record particulars of all members in the household or of only one of them. If the latter, there is the difficulty of selecting the one to be interviewed. Bias is likely to result if the selection is left to the field worker, but if some simple rule is established, for example, to interview the first person contacted in the household, it is quite likely that the results will contain a disproportionate number of house-wives. Suppose, however, it is decided to record particulars of all members of the household, then there is a strong possibility, due to some association between the occupations of father and son, that bias will appear in the estimates of occupational structure. These considerations led to the rejection of the household as a sampling unit.

Sampling from a complete list of individuals in the population seemed a somewhat wasteful procedure. The principal information required from persons of school age or under was their age and sex. Consequently the greater part of the interview would be wasted whenever a selected individual came within the "under fifteen" group, and the total number of interviews would have to be correspondingly increased.

It was decided, therefore, that the primary sampling unit should be "Individuals aged fifteen years or over," but for the purpose of estimating the age and sex structure, interviewers were instructed to record details of the age and sex of each member of the household to which the selected informant belonged. This has important consequences that will be described later.

The actual process of sampling is the selection of individuals from the whole "population" under study. It is evident that there are three necessary elements. First a decision must be made on how many individuals are to be selected; secondly there must be a complete list of all individuals from which the actual selection can be made; and thirdly, some method of selection is required which will give to every member of the population an equal chance of being included in the sample.

As the sample was not to be stratified, the prime consideration

determining its size was the degree of accuracy required in the results. The error which might arise from using a sample instead of a census is largely dependent upon the size of the sample and the amount of variability in the material to be sampled. Nothing was known about the latter factor, and the decision had therefore to be based on the following elementary theorem :—

If the percentage of individuals in a universe who possess a given characteristic is p , then the standard error of the percentage in simple random samples is given by $\sqrt{p(100-p)/n}$, where n is the number of individuals in the sample.

The product $p(100-p)$ varies with the magnitude of the percentage. It is small at the extremes and reaches its maximum of 2,500 when $p=50\%$. The maximum value of the standard error then becomes $\sqrt{2,500/n}$ which is equal to $50/\sqrt{n}$.

It was desirable that the general results of the survey should be subject to a standard error not greater than 2%. This condition results in the simple equation:

$$2 = 50/\sqrt{n}$$

which is easily re-arranged as $\sqrt{n}=25$ or $n=625$. Hence it was decided to aim at a sample of not less than 625 interviews.

Selection from an up to date "list" of the adult population was made with the aid of Kendall & Babington Smith's *Tables of Random Sampling Numbers*.^{*} As the number of individuals forming the population to be sampled was estimated to be in the region of 45,000, five batches each containing 150 four-figure numbers were extracted from these Tables. The first batch provided 150 random numbers between 0000 and 9999. By pre-fixing the number one to each of the second batch another 150 random numbers were secured between 10,000 and 19,999. This process was repeated up to the fifth batch which provided the final set in the interval 40,000 to 49,999.

The next step was to count the reference sheets which formed the "population." This laborious task had to be done manually. The name and address on each sheet, the number of which corresponded with one of the sampling numbers was recorded on a separate card, and these cards formed the "Sample List." Altogether more than 47,000 sheets were counted and 672 names and addresses extracted.

^{*} *Tracts for Computers*, No. XXIV 1946, (Cambridge University Press).

Interviewers called at every address in the Sample List with the following result:—

Interview completed	.. ..	638
Unable to locate person named		23
Interview refused	.. ..	11
		<hr/>
		672
		<hr/>

ESTIMATING THE NUMBER OF PERSONS IN EACH AGE-SEX GROUP.

Once the interviewing was completed all the required information was available in the form of entries on each of the 638 recording schedules. The next step was to make use of this information to estimate the number of persons in each age and sex group of the population. Since the type of sampling which was employed introduces some complications, the method of estimation must be discussed in some detail.

Two preliminary remarks are necessary. First, to avoid repetition of cumbersome phrases, the term "Adult" will be used instead of "Person aged fifteen years or over," and "Male Infant" instead of "Male person under the age of five years." Secondly, a complete count was made of the number of "Adults" in the population. The number was 47,344.

It may be somewhat clearer if the procedure for the simplest case is first described followed by a discussion of the modifications which will be needed to meet the particular sampling scheme adopted. It will be sufficient to consider the estimation of a single age-sex group—say males under five years (Male Infants). The method is the same for every age-group, and to estimate total population, it is merely necessary to add up the estimates for the separate groups.

The general principle is self-evident: the sample results are to be multiplied by a factor representing the reciprocal of the proportion of the population which came within the sample. For example, if the sample is one-tenth of the population the results must be multiplied by ten. The first step is to count the number of adults recorded on all schedules: let this number be represented by A . Since the number of adults in the population is already known, the proportion included in the sample, is $A/47344$; hence the multiplier is $47344/A$.

Now to estimate the number of male infants in the population, it would merely be necessary to count how many were recorded on the schedules and multiply by $47344/A$. This can be expressed in equation form (writing M for the number of male infants in the sample) as:—

$$\text{Estimate} = 47344 \frac{M}{A} \dots\dots\dots (1)$$

It is now necessary to consider the effect of the sampling procedure which was adopted. It will be recalled that the sampling unit was the "Adult," but the age and sex was recorded of all persons living in the same household as the informant. The "universe" for sampling consisted of a set of cards—one for each adult. Consider now two households in which the first has one adult member and the second has three adult members. The first household will be represented in the "universe" from which the sample was drawn by one card, but the second household will be represented by three cards. It follows that the probability of selecting the three-member household is three times as great as the probability of selecting the one-member household. In consequence, the sample will not reflect the true proportion of households of different adult sizes. The proportion of households with three adults, for example, will tend to be increased threefold compared with the proportion of households with only one adult.

It will be seen that a much truer picture of the population would be obtained by taking only a sample of the original sample, by selecting at random:—

All the schedules relating to households with one adult

Half the schedules relating to households with two adults

One-third of the schedules relating to households with three adults

and so on.

This procedure is not only wasteful, since it throws away a great part of the data already obtained, but is also unnecessary. The same result can be obtained by assigning to each measurement a weight of:—

1 when the schedule relates to a household with one adult

$\frac{1}{2}$ when the schedule relates to a household with two adults

$\frac{1}{3}$ when the schedule relates to a household with three adults

and so on.

With these adjustments for weighting, equation (1) can be re-written:

$$\text{Estimate} = 47344 \frac{M_w}{A_w} \dots\dots\dots (2)$$

The suffix w indicates that both M and A are obtained by counting "weighted numbers," where the weight is the reciprocal of the number of adults in the household. Writing m_1, m_2, \dots, m_n for the number of male infants in the first, second, ... n th households, and a_1, a_2, \dots, a_n for the number of adults in the same households, the weighted sum M can be written:

$$M_w = \frac{m_1}{a_1} + \frac{m_2}{a_2} + \dots \frac{m_n}{a_n} \dots\dots\dots (3)$$

The weighted sum A_w takes a very simple form, for:

$$A_w = \frac{a_1}{a_1} + \frac{a_2}{a_2} + \dots \frac{a_n}{a_n} = n \dots\dots\dots (4)$$

The numerator and denominator cancel out in every term, and the sum is merely the number of completed schedules = 638. The estimated number of male infants now takes the form:

$$\text{Estimate} = 47344 \frac{1}{n} \left\{ \frac{m_1}{a_1} + \dots \frac{m_n}{a_n} \right\} \dots\dots\dots (5)$$

The process of summing all values of $\frac{m}{a}$ and dividing by their number is nothing more than finding the arithmetic mean. Now for convenience write r instead of $\frac{m}{a}$, and \bar{r} for the average of all r 's then the equation (5) reduces to:

$$\text{Estimate} = 47344 \bar{r} \dots\dots\dots (6)$$

The actual computation of \bar{r} can be achieved without the necessity of calculating the value of r for each schedule. The schedules must first be divided into groups according to the number of adults in the household. If M_1, M_2, M_3, \dots is the number of male infants recorded on all schedules in the 1st, 2nd, 3rd, ... groups (representing households with 1, 2, 3, ... adults) then:

$$\bar{r} = \frac{1}{n} \left\{ M_1 + \frac{1}{2}M_2 + \frac{1}{3}M_3 + \dots \right\} \dots\dots\dots (7)$$

All the information necessary to compute \bar{r} from equation (7) is contained in Table I which is merely a simple count of the number of schedules in categories defined by the row and column headings. Tables similar to this were prepared for each age-sex group, using Punch-Sort-Tabulate equipment for the sorting and counting.

Table I.
Number of Schedules on which are recorded the
specified number of (a) Adults, and (b) Male Infants.

No. of Adults in Household	No. of Male Infants in Household				M	Σr^2
	0	1	2	Total		
1	11	—	—	11	—	—
2	200	31	10	241	51	17.7500
3	148	10	2	160	14	2.0000
4	112	10	2	124	14	1.1250
5	51	5	1	57	7	0.3600
6	20	5	—	25	5	0.1389
7	13	2	—	15	2	0.0408
8	1	1	—	2	1	0.0156
9	—	—	—	—	—	—
10	2	—	—	2	—	—
11	—	—	1	1	2	0.0331
	558	64	16	638	96	21.4634

The column headed M is a computation of the number of male infants recorded in the sample divided into groups according to the number of adults in the household. For example, in the second row 31 households each had one male infant, and ten households had two each, hence the total for that group is fifty-one male infants. Applying equation (7):—

$$\begin{aligned}\bar{r} &= \frac{1}{638} \left\{ \frac{1}{2}(51) + \frac{1}{2}(14) + \frac{1}{2}(14) \dots \right\} \\ &= 0.057198.\end{aligned}$$

Now applying equation (6) :—

$$\begin{aligned}\text{Estimated number of male infants} &= 47344 \times 0.057198 \\ &= 2708.\end{aligned}$$

SAMPLING ERROR.

No sample can be expected to give results which are precisely true of the whole population. There are always errors associated with the sampling process. What is important is that where the sample is a "random" one, precise limits to these errors can be calculated. If, however, the selection is made in some other way the error is likely to be incalculable. It was for this reason that emphasis was placed upon the use of random numbers for selection.

It has already been noted that the errors due to sampling will depend upon:

- (a) The size of the sample, and
- (b) The variability of the material.

Now the only factor which was estimated from the data was \bar{r} and this was the average of 638 different values of r ; one for each completed schedule. It is the variability of these quantities which will affect the sampling error. The fact that they were not separately calculated is quite immaterial. This variability is measured by the Standard Deviation (S.D.) of the distribution of r and is given by the equation:

$$\text{S.D.} = \sqrt{\frac{r_1^2 + r_2^2 + \dots + r_n^2 - n\bar{r}^2}{n-1}} \dots\dots\dots (8)$$

Further, the standard error (S.E.) of \bar{r} is related to this standard deviation by the equation:

$$\text{S.E.} (\bar{r}) = \frac{\text{S.D.}}{\sqrt{n}} \dots\dots\dots (9)$$

a formula which takes into account both the size and the variability of the sample.

Combining these two equations and introducing the multiplier 47344, the standard error of the estimate of the number of male infants can be expressed as:

$$\text{S.E.} (47344\bar{r}) = 47344 \sqrt{\frac{\sum r^2 - n\bar{r}^2}{n(n-1)}} \dots\dots\dots (10)$$

where the expression $\sum r^2$ is merely a shorthand form for $r_1^2 + r_2^2 + \dots + r_n^2$.

The terms r and n are already known, so the only new term to be computed is $\sum r^2$. Recalling that $r = \frac{m}{a}$, and therefore, $\sum r^2 = \sum \left(\frac{m}{a}\right)^2$ and that m and a appear as column and row

headings respectively in Table I, it will be seen that no new tabulation is needed for computation of $\sum r^2$.

The method of computation may again be illustrated from the second row of the table. There were 31 households with one male infant and two adults; therefore, $\frac{m}{a} = \frac{1}{2}$ and the contribution to $\sum r^2$ from these households will be $31 \times (\frac{1}{2})^2$. The remaining ten households in this row will likewise contribute $10 \times (\frac{2}{3})^2$, so that the whole row contributes $(31 \times \frac{1}{4}) + 10 = 17.75$.

In a similar way the third row contributes:

$$\frac{1}{3^2} [10(1)^2 + 2(2)^2] = 18 \div 9 = 2.$$

The contribution from each row is shown in the last column of the table, and the total of this column $= \sum r^2 = 21.4634$.

All that remains is to substitute the calculated quantities in equation (10) giving:

$$\begin{aligned} \text{Standard Error} &= 47344 \sqrt{\frac{21.4634 - (638 \times 0.057198)^2}{638 \times 637}} \\ &= 327. \end{aligned}$$

There is no simple relationship between the standard errors of the estimates for any two age-sex groups, and consequently computations similar to the above have to be worked for each group separately.

SURVEY RESULTS.

The computations described in the preceding section were carried out for each of the 20 age-sex groups, and also for various combinations as for example, the sum of males plus females for each age group. The figures are assembled in Table II.

The estimate of total population can be compared with two others obtained from outside sources. Early in 1950, the Council of the County Borough required to know the size of the population more precisely than could be obtained within the limits of sampling error. A "Census count" was therefore carried out based on departmental records; it is impossible however, to appraise the accuracy of the result without a full knowledge of the working of the official machinery. Without this knowledge it can only be presumed that within the space of nine months some differences are bound to have arisen between the records and the actual population which

they represent. The result of this count must, therefore, be regarded as an estimate with an error which cannot be computed.

The second external source is, of course, the periodic estimates of population made by the Registrar-General and

Table II.
Estimated Distribution of Population by
Age and Sex.
(Mid-1949)

Age last Birthday	Males		Females		Persons	
	No.	Standard Error	No.	Standard Error	No.	Standard Error
Under 5	2,708	± 327	2,844	± 306	5,552	± 463
5—9	3,041	332	2,540	277	5,581	464
10—14	2,594	272	2,525	285	5,119	402
15—24	4,340	290	4,929	316	9,269	441
25—34	5,137	329	5,564	366	10,701	596
35—44	5,002	351	4,420	325	9,422	590
45—59	4,887	312	5,338	304	10,225	537
60—64	1,168	169	1,545	202	2,713	303
65 & over	2,192	235	2,821	306	5,013	434
All Ages	31,069	670	32,526	616	63,595	890

published in his Quarterly Return. There is an important difference between the sample estimate and that made by the Registrar General. The latter excluded members of the armed forces. In contrast with this the sample data specifically includes those whose permanent home is within the area of the County Borough for, in any study related to Town Planning,

provision must be made for those temporarily absent from home. The exact treatment of members of the armed forces during the so-called "Census-count" is not stated and must remain an element of doubt in the interpretation of the result.

With these preliminary remarks in mind the various estimates of the population may be compared:—

(a) Estimate from Sample Survey	
(mid-1949)	63,595 \pm 890
(b) Census count (Spring, 1950) ..	64,434
(c) Registrar-General (end 1948) ..	62,530
Registrar-General (mid-1949) ..	62,880
Registrar-General (end 1949) ..	63,310

For England and Wales as a whole the Registrar-General estimated the total population as 101.6% of the civilian population at mid-1949. Applying this crude correction, it would appear that the population of the County Borough at mid-1949, including such members of the armed forces at normally reside there, was in the region of 63,900. This may be compared with the survey of 63,595 \pm 890.

There is substantial agreement among these various estimates. Recognizing that for planning purposes the figure must include all whose permanent home is in the area regardless of whether or not they may be serving in the armed forces at the date when the estimate is made, then the population may be said to be 64,000, correct to the nearest 1,000.

Some months after the field work had been completed, the Registrar-General published estimates of the age and sex distribution of the population at 31st December, 1947, and these also may be compared with the survey findings. To minimise the effect of the difference in dates the figures are presented as proportions per 1,000 of population. As before, the Survey figures include members of the armed forces while the Registrar-General excludes them. This prevents accurate comparison of the male groups, and the 15-24 years in particular. The effect on the female groups should be insignificant. The comparison is presented in Table III.

Bearing in mind the two major disturbing influences in the comparison:—

(1) Variation in date of estimate

and (2) Different treatment of armed forces

it may be said that there is sufficient broad agreement to place confidence in the results of the survey within the limits of sampling error.

Table III.

Estimated Age-Sex Distribution per 1,000 of Population
 (Survey — Mid - 1949)
 (Reg.-Gen. — End 1947)

Age last Birthday	MALES			FEMALES			PERSONS		
	Reg.-Gen.	Survey	Standard Error	Reg.-Gen.	Survey	Standard Error	Reg.-Gen.	Survey	Standard Error
0—4	97	87	± 11	85	87	± 9	91	87	± 7
5—14	161	181	14	146	156	13	153	168	11
15—24	118	140	9	152	152	10	136	146	7
25—34	165	165	11	153	171	11	159	168	9
35—44	163	161	11	144	136	10	153	148	9
45—64	216	195	11	229	212	10	223	203	9
65 & over	80	71	8	91	87	9	86	79	7
All Ages	1,000	1,000		1,000	1,000		1,000	1,000	

Finally the survey estimates may be compared with an estimate published later by the Registrar-General which relates to 30th June, 1949, and which divides the population into two groups: those under 15 years, and those 15 years and over. The figures have been approximately corrected to allow for members of the armed forces by increasing the Registrar-General's total by 1,000. The comparison then shows:—

	Sample Survey		Registrar-General	
	Number	%	Number	%
Under 15 years ..	16,250	25.6	15,088	23.6
15 years and over ..	47,345	74.4	48,792	76.4
All ages	63,595	100	63,880	100

The sample shows a slightly greater proportion of "under 15s" than the official estimates but the difference of 2% has no statistical significance.

APPENDIX IV

THE NEIGHBOURHOODS OF DUDLEY.

It should be emphasised that one consequence of the division of the sample into a number of separate neighbourhoods is the relative smallness of the size of each of the sub-totals, with a corresponding increase in the sampling error and of the reliability which can be attached to the results. The basic data from the Sample Survey has been collected into the six Tables given below, and a seventh Table has been added showing for each Neighbourhood the magnitude of the standard error which should be associated with each of the percentages given in the preceding Tables, thus making it possible to check their reliability. References in the text of the Report to material from the Sample Survey, included in these Tables, have been restricted to those ratios and relationships which are statistically significant.

Each of the following Tables, I—VI, summarises the information obtained in the Survey in reply to the questions reproduced

in them. Table VII gives the Standard Errors which should be associated with the percentages given in the preceding Tables; Tables I—VI should therefore be read in conjunction with Table VII.

APPENDIX IV.

Table I.

Question: "Did you use your vote in the recent local election?"

Area	Numbers in Sample			%	
	Electors	Voted	Did not vote	Voted	Did not vote
Priory Hill ..	121	92	29	75	25
Kate's Hill ..	69	51	18	75	25
Tansley Hill ..	44	41	3	95	5
Netherton ..	78	55	23	70	30
Dudley Wood ..	50	34	16	70	30
Woodside ..	65	43	22	65	35
Town Centre ..	24	19	5	80	20
Other Areas ..	100	74	26	75	25
All Areas ..	551	409	142	74	26
Not on Electoral Register ..	83				
Total in Sample..	634				

* To the nearest 5%. The figures for separate areas do not justify greater accuracy.

APPENDIX IV.

Table II.

Question: "Do any of your relatives or in-laws live in the same street as you ? "

Area	Number in Sample			% *	
	Total	Answered " Yes "	Answered " No "	Answered " Yes "	Answered " No "
Priory Hill ..	151	25	126	15	85
Kate's Hill ..	82	25	57	30	70
Tansley Hill ..	50	10	40	20	80
Netherton ..	85	23	62	25	75
Dudley Wood	57	21	36	35	65
Woodside ..	77	25	52	35	65
Town Centre	26	4	22	15	85
Other Areas ..	106	24	82	25	75
All Areas ..	634	157	477	25	75

* To the nearest 5%. The figures for separate areas do not justify greater accuracy.

APPENDIX IV.

Table III.

Question: "Have you any personal friends amongst your neighbours?"

Area	Number in Sample			%*	
	Total	Answered "Yes"	Answered "No"	Answered "Yes"	Answered "No"
Priory Hill ..	151	48	103	30	70
Kate's Hill ..	82	40	42	50	50
Tansley Hill..	50	20	30	40	60
Netherton ..	85	29	56	35	65
Dudley Wood	57	29	28	50	50
Woodside ..	77	26	51	35	65
Town Centre	26	8	18	30	70
Other Areas ..	106	41	65	40	60
All Areas ..	634	241	393	38	62

* To the nearest 5%. The figures for separate areas do not justify greater accuracy.

APPENDIX IV.

Table IV.

Question: " If free to choose, would you prefer to live among the same kind of people ? "

Area	Number in Sample				%		
	Total	Answered " Yes "	Answered " No "	Did not answer	Answered " Yes "	Answered " No "	Did not answer
Priory Hill ..	151	109	42	—	70	30	—
Kate's Hill ..	82	60	21	1	75	25	—
Tansley Hill ..	50	39	10	1	80	20	—
Netherton ..	85	68	16	1	80	20	—
Dudley Wood	57	52	5	—	90	10	—
Woodside ..	77	55	17	5	70	25	5
Town Centre ..	26	15	8	3	60	30	10
Other Areas ..	106	65	33	8	60	30	10
All Areas ..	634	463	152	19	73	24	3

* To the nearest 5%. The figures for separate areas do not justify greater accuracy.

APPENDIX IV.

Table V.

Question: "If free to choose, would you prefer to live in the same district?"

Area	Number in Sample			%	
	Total	Answered "Yes"	Answered "No"	Answered "Yes"	Answered "No"
Priory Hill ..	151	109	42	70	30
Kate's Hill ..	82	66	16	80	20
Tansley Hill ..	50	40	10	80	20
Netherton ..	85	64	21	75	25
Dudley Wood	57	51	6	90	10
Woodside ..	77	67	10	85	15
Town Centre	26	16	10	60	40
Other Areas ..	106	66	40	60	40
All Areas ..	634	479	155	76	24

* To the nearest 5%. The figures for separate areas do not justify greater accuracy.

Table VI.

Question: "Have you visited the shops (or market) in the Dudley Centre during the last week?"

Area	Number in Sample				%*		
	Total	Answered "yes once"	Answered "yes more than once"	Answered "no"	Answered "yes once"	Answered "yes more than once"	Answered "no"
Priory Hill ..	151	43	60	48	30	40	30
Kate's Hill ..	82	27	28	27	30	35	35
Tansley Hill ..	50	14	20	16	30	40	30
Netherton ..	85	17	12	56	20	15	65
Dudley Wood	57	7	10	40	10	20	70
Woodside ..	77	21	16	40	25	20	55
Town Centre ..	26	6	11	9	25	40	35
Other Areas ..	106	164	205	265	26	32	42
All Areas ..	634	164	205	265	26	32	42

* To the nearest 5%. The figures for separate areas do not justify greater accuracy.

Table VII.

Standard Error to be associated with percentages given in previous Tables.

%	Priory	Kate's Hill	Tansley Hill	Netherton	Dudley Wood	Wood-side	Town Centre	Other Areas	All Areas	%
5	±1.8	±2.5	±3.2	±2.4	±3.0	±2.5	±4.6	±2.1	±0.9	95
10	2.5	3.4	4.4	3.3	4.1	3.5	6.4	3.0	1.2	90
15	2.9	4.0	5.2	4.0	4.9	4.2	7.6	3.5	1.4	85
20	3.3	4.5	5.9	4.4	5.5	4.7	8.5	3.9	1.6	80
25	3.6	4.9	6.4	4.8	5.9	5.0	9.2	4.3	1.7	75
30	3.8	5.2	6.7	5.1	6.3	5.3	9.7	4.5	1.8	70
35	3.9	5.4	7.0	5.3	6.5	5.6	10.1	4.7	1.9	65
40	4.0	5.5	7.2	5.4	6.7	5.7	10.4	4.8	1.9	60
45	4.1	5.6	7.3	5.5	6.8	5.8	10.5	4.9	2.0	55
50	4.1	5.6	7.3	5.5	6.8	5.8	10.6	4.9	2.0	50

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